Historic, archived document

Do not assume content reflects current scientific knowledge, policies, or practices.

U. S. DEPARTMENT OF AGRICULTURE,

BUREAU OF STATISTICS—BULLETIN NO. 38.

W. M. HAYS, Assistant Secretary, in Charge.

BUREAU OF FORESTRY
LIBRARY
OCT 1905
[illegible]
U. S. DEPT. OF AGRICULTURE

CROP EXPORT MOVEMENT

AND

PORT FACILITIES ON THE ATLANTIC AND GULF COASTS.

BY

FRANK ANDREWS,

Expert in Transportation Statistics, Division of Foreign Markets.

WASHINGTON:
GOVERNMENT PRINTING OFFICE.
1905.

PUBLICATIONS OF THE DIVISION OF FOREIGN MARKETS.

BULLETINS.

[To be procured at the prices indicated, from the Superintendent of Documents, Government Printing Office, Washington, D. C.]

No. 1.—Great Britain and Ireland. Price (including supplement), 10 cents.
No. 2.—The German Empire. Price, 5 cents.
No. 3.—France. Price, 5 cents.
No. 4.—Canada. Price, 5 cents.
No. 5.—Netherlands. Price, 5 cents.
No. 6.—Belgium. Price, 5 cents.
No. 7.—Norway. Price, 5 cents.
No. 8.—Sweden. Price, 5 cents.
No. 9.—Trade of Denmark. Price, 5 cents.
No. 10.—Our Foreign Trade in Agricultural Products during the Five Fiscal Years 1893–1897. Price, 5 cents.
No. 11.—Spain's Foreign Trade. Price, 5 cents.
No. 12.—Our Trade with Spain, 1888–1897. Price, 5 cents.
No. 13.—Trade of Puerto Rico. Price, 5 cents.
No. 14.—Trade of the Philippine Islands. Price, 10 cents.
No. 15.—Our Foreign Trade in Agricultural Products, 1894–1898. Price, 5 cents.
No. 16.—Distribution of the Agricultural Exports of the United States, 1894–1898. Price, 10 cents.
No. 17.—Sources of the Agricultural Imports of the United States, 1894–1898. Price, 10 cents.
No. 18.—Our Trade with Japan, China, and Hongkong, 1889–1899. Price, 10 cents.
No. 19.—Our Foreign Trade in Agricultural Products, 1890–1899. Price, 5 cents.
No. 20.—Agricultural Exports of the United States, by Countries, 1895–1899. Price, 10 cents.
No. 21.—Agricultural Imports of the United States, by Countries, 1895–1899. Price, 5 cents.
No. 22.—Our Trade with Scandinavia, 1890–1900. Price, 10 cents.
No. 23.—Our Foreign Trade in Agricultural Products, 1891–1900. Price, 5 cents.
No. 24.—Sources of the Agricultural Imports of the United States, 1896–1900. Price, 10 cents.
No. 25.—Distribution of the Agricultural Exports of the United States, 1896–1900. Price, 10 cents.
No. 26.—Agricultural Imports of the United Kingdom, 1896–1900. Price, 15 cents.
No. 27.—Our Foreign Trade in Agricultural Products, 1892–1901. Price, 5 cents.
No. 28.—Sources of the Agricultural Imports of the United States, 1897–1901. Price, 10 cents.
No. 29.—Distribution of the Agricultural Exports of the United States, 1897–1901. Price, 10 cents.
No. 30.—Agricultural Imports of Germany, 1897–1901. Price, 20 cents.
No. 31.—Sources of the Agricultural Imports of the United States, 1898–1902. Price, 10 cents.
No. 32.—Distribution of the Agricultural Exports of the United States, 1898–1902. Price 15 cents.
No. 33.—Foreign Trade of the United States in Forest Products, 1902. Price, 5 cents.
No. 34.—Agricultural Exports of the United States, 1851–1902. Price, 10 cents.
No. 35.—Foreign Import Tariffs on Meat and Meat Products, 1903. Price, 5 cents.
No. 36.—Foreign Import Tariffs on Fruits and Nuts, 1903. Price, 5 cents.
No. 37.—Foreign Import Tariffs on Grain and Grain Products, 1903. Price, 5 cents.

CIRCULARS.

[For free distribution; apply to the Secretary of Agriculture, Washington, D. C.]

No. 1.—Peaches and Other Fruits in England. (Exhausted.)
No. 2.—American Dried Apples in the German Empire.
No. 3.—Imports and Exports for 1893 and 1894. (Exhausted.)
No. 4.—An Example for American Farmers and Dairymen. (Exhausted.)
No. 5.—The Treaty of Shimonoseki between China and Japan of April 17, 1895, and Our Possibilities of Trade with those Countries. (Exhausted.)
No. 6.—Imports and Exports for 1893, 1894, and 1895. (Exhausted.)
No. 7.—Extension of Markets for American Feed Stuffs.
No. 8.—The Manchester District of England as a Market for American Products.
No. 9.—Imports and Exports for 1893, 1894, 1895, and 1896. (Exhausted.)
No. 10.—Course of Wheat Production and Exportation in the United States, Canada, Argentina, Uruguay, Russia, and British India from 1880 to 1896.
No. 11.—Agricultural Products Imported and Exported by the United States in the Years Ended June 30, 1892, to 1896, inclusive. (Exhausted.)
No. 12.—Sources of the Principal Agricultural Imports of the United States during the Five Years Ended June 30, 1896. (Exhausted.)
No. 13.—Distribution of the Principal Agricultural Exports of the United States during the Five Years Ended June 30, 1896. (Exhausted.)
No. 14.—Hamburg as a Market for American Products.
No. 15.—Exports of Cotton from Egypt.
No. 16.—Our Trade with Cuba from 1887 to 1897.
No. 17.—United States Wheat for Eastern Asia.
No. 18.—Hawaiian Commerce from 1887 to 1897.
No. 19.—Austria-Hungary as a Factor in the World's Grain Trade; Recent Use of American Wheat in that Country.
No. 20.—Agricultural Imports and Exports, 1893–1897.
No. 21.—Agricultural Imports and Exports, 1894–1898.
No. 22.—Agricultural Imports and Exports, 1895–1899.
No. 23.—Agricultural Imports and Exports, 1896–1900.
No. 24.—Agricultural Imports and Exports, 1897–1901.
No. 25.—Our Foreign Trade in Agricultural Products, 1902.

[Continued on page 3 of cover.]

U. S. DEPARTMENT OF AGRICULTURE,
BUREAU OF STATISTICS—BULLETIN NO. 38.
W. M. HAYS, Assistant Secretary, in Charge.

CROP EXPORT MOVEMENT

AND

PORT FACILITIES ON THE ATLANTIC AND GULF COASTS.

BY

FRANK ANDREWS,
Expert in Transportation Statistics, Division of Foreign Markets.

WASHINGTON:
GOVERNMENT PRINTING OFFICE.
1905.

LETTER OF TRANSMITTAL.

U. S. Department of Agriculture,
Bureau of Statistics,
Washington, D. C., July 22, 1905.

Sir: I have the honor to transmit herewith a report on Crop Export Movement and Port Facilities on the Atlantic and Gulf Coasts, prepared by Frank Andrews, expert in transportation statistics, under the direction of George K. Holmes, Chief of the Division of Foreign Markets, the publication of which, as Bulletin No. 38 of this Bureau, is recommended.

Respectfully,

W. M. Hays,
Assistant Secretary, in Charge.

Hon. James Wilson,
Secretary of Agriculture.

PREFATORY NOTE.

No other class of producers for export has as great an interest in the problems and facilities of transportation from the farm to the primary market and from that to the seacoast as the farmers have. On the basis of value, three-fifths of the exports of this country consist of the raw products of the farms and products in whole or in part manufactured therefrom; and about 56 per cent of the factory value of all manufactured products which contain more or less agricultural materials represents the proportional value of these materials.

This bulletin, it is believed, brings together useful information that has never before been made available in comprehensive form concerning the ports of the Atlantic and Gulf coasts, their facilities, their accommodations, and their inducements for exporting the national surplus of the products of the farm.

Of large importance in connection with this export movement is the struggle of the chief ports for the business, and the results are shown in the losses and gains of the various ports.

This monograph is offered as a distinct contribution to the treatment of a subject that has attracted much attention in recent years.

George K. Holmes,
Chief Division of Foreign Markets.

CONTENTS.

Page
Letter of transmittal 2
Prefatory note 3

CROP EXPORT MOVEMENT.

Competition of ports and routes 9
  Scope of investigation 9
  Contest between Atlantic and Gulf 9
    TABLE 1. Percentages of cotton, wheat, wheat flour, and corn exported from Atlantic and Gulf ports, 1884–1905 10
Cotton 11
  Leading States 11
    TABLE 2. Gross weight of cotton ginned in the United States, 1902–1904 12
  Places of concentration 12
    TABLE 3. Shipments of cotton to important trade centers 13
    TABLE 4. Quantity and percentage of domestic cotton exported from leading Atlantic and Gulf ports, 1884–1904 15
  Decline of cotton exports from North Atlantic ports 16
    TABLE 5. Quantity of domestic cotton exported from Galveston, New Orleans, Savannah, and New York, 1884–1905 17
  Comparison of ports for 1905 17
    TABLE 6. Quantity and percentage of domestic cotton exported from leading ports, 1905 17
Wheat 18
  Shifting of production and export 18
    TABLE 7. Production of wheat in the United States, 1902–1904 18
  Trade centers 19
    TABLE 8. Receipts of wheat at interior cities, 1899–1904 19
    TABLE 9. Receipts of wheat flour at interior cities, 1899–1904 20
  Routes to the Atlantic coast 20
  Comparison of distances 20
    TABLE 10. Straight-line distances from Chicago and Kansas City to leading Atlantic and Gulf ports 21
  Water routes 22
  Wheat exports by customs districts 22
    TABLE 11. Quantity and percentage of domestic wheat exported from leading ports, 1884–1904 23
  Exports of four leading ports 24
    TABLE 12. Quantity of domestic wheat exported from New York, Baltimore, New Orleans, and Galveston, 1884–1905 24

Wheat—Continued. Page.
Export decline and production 25
Exports of wheat flour 25
Table 13. Quantity and percentage of domestic wheat flour exported from leading ports, 1884–1904 26
Exports of five leading ports 27
Table 14. Quantity of domestic wheat flour exported from New York, Baltimore, Philadelphia, Newport News, and New Orleans, 1884–1905 27
Canadian wheat flour 27
Table 15. Quantity and percentage of domestic wheat, including flour, exported from leading ports, 1884–1904 28
Exports of wheat and flour 29
Table 16. Quantity and percentage of domestic wheat and wheat flour exported from leading ports during the year ending June 30, 1905 29
Corn 30
Area of the surplus defined 30
Table 17. Production of corn in the United States, 1902–1904 30
Live stock and animal products 30
Table 18. Number of cattle and hogs received at important trade centers during the year ending December 31, 1904 31
Primary markets 31
Table 19. Receipts of corn at interior cities, 1899–1904 32
Routes to the seaboard 32
Changes in freight rates 32
Table 20. Proportional export freight rates on corn on dates named, 1904–1905 33
Consequent effect upon ports 33
Table 21. Quantity and percentage of domestic corn exported from leading Atlantic and Gulf ports during the winter months, 1903–1904 and 1904–1905 34
Review of twenty-one years 34
Table 22. Quantity and percentage of domestic corn exported from Atlantic and Gulf ports, 1884–1904 35
Exports of four leading corn ports 36
Table 23. Quantity of corn exported from Baltimore, New York, Philadelphia, and New Orleans, 1884–1905 37
Table 24. Quantity and percentage of domestic corn exported from leading ports during the year ending June 30, 1905 37

PORT FACILITIES.

General information 38
Sources of information 38
Terminal facilities 38
Transfer of freight to vessels 38
Wharves and docks 39
Depths of channels 40
Table 25. Distance to deep water, and depth of channel, of Atlantic and Gulf ports 40
Origin of exports 41
Cost of transporting cotton 41

General information—Continued. Page.
- Commercial documents 41
  - Bill of lading 42
  - Invoice 46
  - Certificate of insurance 46
  - Bill of exchange 47
- Live stock carriage 48
- Great variety of articles in a cargo 48

Portland, Me 50
- Canadian transit trade 50
  - Table 26. Canadian wheat and cattle shipped via Portland, Me., during the fiscal years 1904 and 1905, by months 51
- Railway routes 51
- Seaboard terminals 52
- Portland's foreign trade 52

Boston 52
- Steamship wharves and railway terminals 52
- Exports from Boston 53
  - Table 27. Total exports of wheat, corn, and flour from Boston consigned to leading European ports for the six years 1898–1903 54

New York 55
- Third in importance of the world's ports 55
- Wharves, docks, and warehouses 55
- Grain elevators 57
- Commercial handling of certain products 58

Philadelphia 60
- Foreign trade and its accommodations 60
- Grain elevators 61
- Shipping cattle 61

Baltimore 62
- One of the best harbors on the Atlantic coast 62
- Railroad terminals 63
- Leading articles exported 63
  - Table 28. Principal exports from Baltimore, 1902–1904 64
- Grain trade 64
- Cattle and meat 65

Newport News 66
- Prominent features of this port 66

Norfolk 67
- Its increasing importance 67
- Railroad facilities 67

Wilmington, N. C 68
- Facilities 68
- Export of cotton 69

Charleston 69
- Equipment and accessibility 69

Savannah 70
- Capabilities for export business 70

Pensacola 71
- Harbor, wharves, and elevator 71

Mobile 72
- Freight brought by rail and river 72
- Value of foreign trade 74

Page.

New Orleans 74

Approach from the Gulf 74

Wharf management 74

Railroad terminals 75

River connections 76

TABLE 29. Number of sailing and steam vessels cleared from the port of New Orleans, 1899–1904 77

International trade 77

Galveston 78

Rapid rise to prominence 78

Equipment for large trade 78

Great gain in exports 79

CROP EXPORT MOVEMENT AND PORT FACILITIES.

CROP EXPORT MOVEMENT.

COMPETITION OF PORTS AND ROUTES.

SCOPE OF INVESTIGATION.[a]

The purpose of this bulletin is to give a brief treatment of the port facilities of the principal seaports on the Atlantic Coast and the Gulf of Mexico and of the exports of farm products through those ports. The discussion includes a sketch of the regions of production of cotton, wheat, and corn; of the trade centers in the interior to which these products are shipped in large quantities; the general movement of these articles from the trade centers to the seaboard, and the export movements from leading ports.

CONTEST BETWEEN ATLANTIC AND GULF.

The surplus cotton and corn of the United States are produced east of the Rocky Mountains and when exported are sent principally from the seaports of the Atlantic and Gulf coasts. The Pacific seaboard cities up to 1905 had but an insignificant share in the export trade in cotton and corn. The wheat exported from the Pacific Coast is generally the product of the States west of the Rocky Mountains, and this trade is, to a large extent, distinct from the export wheat trade passing through the Atlantic and Gulf ports.

In comparing the total exports of a product from the Atlantic ports with its total exports from the Gulf ports, the difference in the number of important ports on the two coasts is to be taken into account. There are four cotton and grain ports of considerable importance on the Gulf of Mexico, while the Atlantic Coast has five or six important grain ports and about the same number of prominent cotton-exporting cities.

---

[a] Unless otherwise stated, all years referring to foreign trade are fiscal years, ending June 30, and all other years mentioned in this bulletin are calendar years. Figures concerning foreign trade used in this bulletin were taken (except where otherwise stated) from the annual reports of Commerce and Navigation of the United States and other statistical publications of the Treasury Department and the Department of Commerce and Labor.

The growth of the export trade of the seaports on the Gulf of Mexico is illustrated by the figures in Table 1. The share of cotton, wheat, wheat flour, and corn exported from the Atlantic ports decreased during the twenty-one fiscal years ending with 1904, while the percentages exported from the ports on the Gulf Coast increased.

The Gulf Coast exported 44 per cent of the total cotton exports of the United States during 1884–1888 and 65 per cent in 1904; while the Atlantic seaboard cities exported 55 per cent in 1884–1888 and only 33 per cent in 1904. In the wheat trade the Atlantic ports declined from 59 per cent during 1884–1888 to 20 per cent in 1904, and the Gulf ports increased from 2 per cent to 55 per cent during the same time. The Gulf Coast's share in the wheat flour exports in 1904 was 12 per cent of the total for the United States, a large relative increase over previous years. The percentage of the corn export trade handled by the Atlantic ports and by the Gulf ports changed but little during the period 1884–1904.

The abnormal conditions in the export grain trade during the fiscal year 1905 were marked by a drop in the percentage of wheat exported from the Gulf ports from 55 per cent in 1904 to 1 per cent in 1905, and by the rise in the exports of corn from those ports from 16 per cent to 29 per cent during the same time.

During the twenty-two years ending with 1905 the Atlantic and Gulf ports together handled from 94 to 99 per cent of the exports of cotton, and from 87 to 91 per cent of the corn exported; but in the wheat and flour trade a considerable amount was exported from the Pacific Coast. In 1905 only 6 per cent of the wheat exported went from Atlantic and Gulf seaports, while the Pacific Coast cities handled 92 per cent. Of the wheat flour exported in 1905 the Atlantic and Gulf ports shipped 60 per cent, the Pacific ports 35 per cent, and 5 per cent was exported across the borders into Canada and Mexico.

TABLE 1.—*Percentages of cotton, wheat, wheat flour, and corn exported from Atlantic and Gulf ports, 1884–1905.*

Year ending June 30—	Cotton.		Wheat.		Wheat flour.		Corn.	
	Atlantic.	Gulf.	Atlantic.	Gulf.	Atlantic.	Gulf.	Atlantic.	Gulf.
	Per cent.	*Per cent.*	*Per cent.*	*Per cent.*	*Per cent.*	*Per cent.*	*Per cent.*	*Per cent.*
1884–1888	55	44	59	2	81	1	74	15
1889–1893	52	47	53	9	81	1	74	13
1894–1898	44	54	53	10	79	3	71	19
1899–1903	37	60	47	22	74	6	75	16
1904	33	65	20	55	63	12	74	16
1905 [a]	34	60	5	1	53	7	59	29

[a] Preliminary returns.

COTTON.

LEADING STATES.

The three leading States in the production of cotton during the calendar years 1902, 1903, and 1904 were Texas, Mississippi, and Georgia. In 1904 nearly one-fourth of the cotton crop of the United States was produced in Texas, and more than one-half in Texas, Mississippi, and Georgia. The crop of Alabama in 1904 was about 160,000,000 pounds less than that of Mississippi, 150,000,000 pounds more than that of South Carolina, and 180,000,000 pounds more than that of Louisiana.

The cotton States are divided in Table 2 into three groups: Group 1, west of the Mississippi River; Group 2, the eastern part of the Mississippi Valley; and Group 3, the Atlantic Coast.

The principal cotton State in Group 1 is Texas; in Group 2, Mississippi; and in Group 3, Georgia. A large proportion of the cotton shipped from the plantations of the western group of States to Europe goes through Galveston. Cotton from the fields lying between central Louisiana and eastern Alabama and intended for export is shipped, to a considerable extent, from New Orleans, while much of the cotton of the Atlantic States and the eastern edge of the Mississippi Valley, if it is destined for foreign markets, finds it way to Savannah. These three ports shipped three-fourths of all the cotton exported from the United States during the fiscal year 1904. The exports from Galveston during this year were 985,000,000 pounds, and the cotton ginned in the western group of States from the crop grown in 1903 amounted to 2,268,000,000 pounds, or more than twice the exports from Galveston.

Some of the cotton received at seaports is intended for shipment to other parts of the United States and some for use in local cotton mills. Besides the consignments to the three leading ports named there are numerous shipments to other places, and cotton raised in the neighborhood of one port or cotton center is often shipped to a port farther distant. A considerable quantity of cotton from the Southwest, as well as from other parts of the United States, is shipped to ports on the North Atlantic Coast.

TABLE 2.—*Gross weight of cotton ginned in the United States, 1902–1904.*[a]

State.	Cotton year.		
	1902–1903.	1903–1904.	1904–1905.
Group 1:	*Pounds.*	*Pounds.*	*Pounds.*
Texas	1,249,006,472	1,235,540,585	1,569,758,071
Louisiana	441,036,727	412,482,344	542,935,292
Arkansas	485,102,712	367,296,692	456,380,220
Indian Territory	175,799,148	139,173,658	234,507,488
Oklahoma	96,892,027	93,294,258	165,377,690
Missouri	21,127,238	18,906,691	25,259,430
Kansas	24,750	37,500	7,000
Total Group 1	2,468,989,074	2,266,731,728	2,994,225,191
Group 2:			
Mississippi	721,869,939	716,398,171	881,382,931
Alabama	478,107,679	493,110,225	722,566.544
Tennessee	158,574,506	124,497,785	162,551,701
Kentucky	606,566	348,404	1,002,375
Total Group 2	1,359,158,690	1,334,354,585	1,767,503,551
Group 3:			
Georgia	712,521,952	633,681,912	939,871,753
South Carolina	462,745,116	393,712,458	573,689,676
North Carolina	274,770,903	264,353,695	348,726,111
Florida	29,480,140	26,192,920	39,144,158
Virginia	7,806,825	6,537,011	8,097,279
Total Group 3	1,487,324,936	1,324,477,996	1,909,528,977
Total United States	5,315,472,700	4,925,564,309	6,671,257,719

[a] Compiled from Bulletin 19, Bureau of the Census, U. S. Department of Commerce and Labor, 1905.

The mills of the South, and also of the North, are supplied not only from the cotton centers, but also from the small railroad stations and steamboat landings among the cotton fields. Among these numerous movements of cotton from the plantations to the various large and small markets the great export movement through the three ports named is prominent.

PLACES OF CONCENTRATION.

Cotton from plantations and smaller railroad stations and steamboat landings often finds its way to some larger city or town, where large quantities are collected for shipment elsewhere. The shipments from ten of these cities and towns during the crop year ending August 31, 1904, were:

	Commercial bales.
Houston, Tex	2,003,727
Memphis, Tenn	748,841
Augusta, Ga	297,769
Shreveport, La	201,640
Little Rock, Ark	168,744
Montgomery, Ala	142,490
Waco, Tex	113,796
Atlanta, Ga	111,677
Pine Bluff, Ark	95,891
Selma, Ala	85,436

The cotton shipped out of Texas is usually concentrated at Galveston or New Orleans, some going to Shreveport and St. Louis. From these points it may be either exported or shipped to mills in this country. Much of the cotton from Mississippi reaches New Orleans and Memphis, and some goes to Mobile and Savannah. The Georgia cotton largely reaches the market at Savannah, and smaller quantities are sent to Charleston, S. C., Brunswick, Ga., Norfolk, Va., and Wilmington, N. C.

Reports made by Southern railroads to the Department of Agriculture show the quantity of cotton shipped from different railroad stations and the quantity shipped to important trade centers and other destinations. Table 3 is made up of figures taken from these reports.[a]

Table 3.—*Shipments of cotton to important trade centers.*

City.	Year ending August 31—		
	1902.	1903.	1904.
	Bales.	*Bales.*	*Bales.*
Galveston	2,087,829	2,093,070	2,406,031
New Orleans	2,065,309	2,195,671	1,865,296
Savannah	1,112,365	986,746	943,550
Memphis	549,033	742,091	523,034
Wilmington, N. C	305,603	304,857	306,355
Norfolk	282,187	242,672	292,662
St. Louis	592,738	489,508	213,824
Charleston, S. C	280,658	227,657	153,981
Total, eight cities	7,275,722	7,282,272	6,704,733
All other destinations	2,569,126	2,647,817	2,686,890
Total	9,844,848	9,930,089	9,391,623

North Carolina and Virginia cotton is marketed chiefly at Norfolk, Va., and South Carolina cotton at Wilmington, N. C., and at Charleston, S. C. Memphis receives the greater part of the cotton grown in Tennessee. The Arkansas cotton goes chiefly to St. Louis, while Galveston receives, in addition to the crop of the home State, considerable quantities from Indian Territory and Oklahoma.

Of the eight largest concentrating points for cotton, all but two are seaports. The quantity of cotton shipped to eight leading primary markets during the three crop years ending August 31, 1904, appears in Table 3.

It will be seen that New Orleans, Galveston, and Savannah, the chief ports from which cotton was exported in 1904, were also the leading points of concentration of cotton for the three crop years ending with 1903–4. Each of the interior concentrating points, Memphis and St. Louis, during this time received between 1,000,000 and 2,000,000 commercial bales, while the Atlantic ports of Wilmington, N. C., Norfolk, Va., and Charleston, S. C., each received from 700,000 to 900,000 commercial bales.

---

[a] "The Commercial Cotton Crop of 1903–4," by James L. Watkins. (Bulletin No. 34, Bureau of Statistics, U. S. Department of Agriculture.)

The shipments of cotton to important trade centers, as shown in Table 3, include all shipments intended for ultimate destinations beyond the State where the cotton was grown, and comprise practically all the commercial movement to the cities named. These shipments amounted to 29,200,000 commercial bales during the three crop years ending August 31, 1904. From these trade centers the cotton is either shipped to other parts of the United States or is exported.

The cotton received at Savannah during the three years mentioned came chiefly from Georgia, Alabama, North Carolina, South Carolina, and Florida. During each of the three years mentioned Savannah received more of the Florida cotton than any other port. In the year ending August 31, 1904, Pensacola's receipts of Florida cotton were about one half those of the previous year, but about twenty times the quantity received in the crop year 1899–1900. Pensacola received more cotton from Alabama than was sent to any other city during the crop year 1902–3.

The cotton received at New Orleans came principally from Louisiana and Mississippi, 750,000 bales being received from Louisiana in the crop year 1903–4 and 683,000 bales from Mississippi. Texas and Arkansas each supplied New Orleans in this year with about 200,000 bales. Galveston received nearly all of its supply of cotton in 1903–4 from Texas, the amount being 2,259,000 commercial bales.

The quantity of cotton exported from the leading Atlantic and Gulf ports during the fiscal years 1884 to 1904 is shown in Table 4.

TABLE 4.—*Quantity and percentage of domestic cotton exported from leading Atlantic and Gulf ports for years ending June 30, 1884–1904.*

Customs district.	Annual average.								1904.	
	1884–1888.		1889–1893.		1894–1898.		1899–1903.			
	Pounds.	Per cent.	Pounds.	Per cent.	Pounds.	Per cent.	Pounds.	Per cent.	Pounds.	Per cent.
ATLANTIC.										
Boston and Charlestown	81,695,865	3.99	115,543,164	4.47	136,009,468	4.39	122,829,144	3.54	53,643,964	1.74
New York	380,513,438	18.57	413,357,798	16.01	388,147,558	12.52	324,057,798	9.33	232,673,900	7.53
Philadelphia	35,626,751	1.74	17,906,352	.69	14,883,313	.48	9,335,627	.27	24,102,971	.78
Baltimore	76,891,771	3.75	99,192,100	3.84	100,793,155	3.25	85,883,821	2.47	46,725,563	1.51
Newport News[a]	24,796,893	1.21	25,024,168	.97	13,053,039	.42	15,888,861	.46	3,392,115	.11
Norfolk and Portsmouth	128,226,138	6.26	116,159,257	4.50	70,780,117	2.28	24,372,174	.70	3,901,615	.13
Richmond	22,135,511	1.08	68,296,271	2.64	21,389,344	.69	----------	----------	----------	----------
Wilmington, N. C	39,186,834	1.91	61,282,531	2.37	99,265,091	3.20	133,911,427	3.85	156,112,873	5.05
Charleston	141,558,341	6.91	142,799,365	5.53	142,385,949	4.59	78,303,504	2.25	21,209,379	.69
Savannah	193,781,077	9.46	225,830,479	8.75	255,237,054	8.23	391,514,761	11.27	414,180,457	13.40
Brunswick	5,013,789	.24	49,765,170	1.93	61,791,227	1.99	68,065,540	1.96	47,110,685	1.52
Other Atlantic	3,180,520	.15	4,137,713	.17	49,982,842	1.62	17,119,377	.49	5,092,563	.17
Total Atlantic	1,132,606,928	55.27	1,339,294,368	51.87	1,353,718,157	43.66	1,271,282,034	36.59	1,008,146,085	32.63
GULF.										
Pensacola	1,021,989	.05	2,348,651	.09	20,769,938	.67	87,173,490	2.51	66,186,720	2.14
Mobile	25,752,963	1.26	22,332,950	.86	67,486,446	2.18	56,488,925	1.62	62,898,776	2.04
New Orleans	705,832,806	34.44	866,822,578	33.57	978,285,398	31.55	982,086,880	28.27	888,006,414	28.74
Galveston	167,489,433	8.17	310,617,675	12.03	596,851,552	19.25	944,679,344	27.19	985,213,084	31.88
Other Gulf	130,552	.01	----------	----------	----------	----------	13,760	(b)	----------	----------
Total Gulf	900,227,743	43.93	1,202,121,854	46.55	1,663,393,334	53.65	2,070,442,399	59.59	2,002,304,994	64.80
All other	16,334,849	.80	40,845,830	1.58	83,385,037	2.69	132,500,302	3.82	79,404,827	2.57
Total exports	2,049,169,520	100.00	2,582,262,052	100.00	3,100,496,528	100.00	3,474,224,735	100.00	3,089,855,906	100.00

[a] The figures for 1884-1888 refer to Yorktown, formerly the leading port of the present Newport News customs district. The name of the customs district was changed to Newport News by the act of October 12, 1888.

[b] Less than 0.005 per cent.

DECLINE OF COTTON EXPORTS FROM NORTH ATLANTIC PORTS.

One of the most remarkable features appearing in this table is the rapid increase of the exports of cotton from the Gulf ports and the decline in the exports from the Atlantic ports north of Wilmington, N. C. During the five years 1884–1888 about 35 per cent of the cotton exported went from the Atlantic ports as far south as Norfolk, while the Atlantic ports south of Norfolk shipped about 20 per cent. These southern Atlantic ports shipped about the same percentage of the total exports of cotton during the following years. In 1899–1904 20 per cent of the cotton exported from the United States went from the southern Atlantic ports. All but 14 per cent of the cotton exported from the United States in 1904 was shipped from Atlantic and Gulf ports south of Norfolk, and in 1905 about 82 per cent was exported from these ports.

The northern Atlantic ports during 1899–1903 shipped only 17 per cent of the cotton and in 1904 only 12 per cent. During the five-year period ending with 1888 Savannah shipped 9 per cent of the total exports of cotton, and during 1904 it exported 13 per cent. In the same time New York declined from 19 per cent to 8 per cent. Boston, Philadelphia, Norfolk, and Baltimore each declined during the same period, while Wilmington, N. C., and Brunswick, Ga., showed marked increases. The cotton was exported during 1904 from ports nearer the place of production than it had been in earlier years. On the Gulf coast, New Orleans lost but little of its relative importance as a cotton-exporting city, while Galveston made marked gains, and in 1899, 1902, and 1904 it was the leading cotton-exporting city of the United States. During 1905 New Orleans exported more cotton than any other seaport of the United States.

Pensacola and Mobile have both made marked gains in the shipments of cotton during the past fifteen or twenty years, and in 1904 and 1905 Pensacola surpassed Mobile, the exports from Pensacola in 1905 being 103,000,000 pounds and from Mobile 88,000,000 pounds.

From 1884 to 1899 New York exported more cotton than Savannah, but since 1899 Savannah has shipped more cotton abroad than any other city on the Atlantic coast. The exports from Savannah rose from 168,000,000 pounds in 1884 to 254,000,000 pounds in 1894, and in 1905 reached 610,000,000 pounds. The cotton exported from Galveston in 1884 was 191,000,000 pounds, and in 1905 was 1,202,000,000 pounds. New Orleans exported 505,000,000 pounds more in 1905 than in 1884, and the exports from New York in 1905 were 32,000,000 pounds more than in 1884. Table 5 shows the exports of cotton from the four leading ports for the twenty-two years ending with 1905.

TABLE 5.—*Quantity of domestic cotton exported from Galveston, New Orleans, Savannah, and New York, 1884–1905.*

Year ending June 30—	Galveston.	New Orleans.	Savannah.	New York.
	Pounds.	*Pounds.*	*Pounds.*	*Pounds.*
1884	190,574,067	703,698,018	168,313,207	278,358,580
1885	118,044,088	636,183,764	183,013,796	380,324,303
1886	164,517,424	739,227,878	194,862,832	383,178,760
1887	200,834,152	706,868,222	232,599,763	404,760,233
1888	163,477,434	743,186,150	190,115,787	455,945,312
1889	152,535,008	733,463,626	157,637,336	536,614,048
1890	241,259,606	901,507,043	258,420,192	400,713,507
1891	326,776,311	976,130,406	293,759,863	385,504,909
1892	421,076,361	1,069,024,221	244,204,012	387,562,496
1893	411,441,087	653,987,593	175,130,994	356,394,030
1894	412,693,769	832,311,258	254,285,342	397,160,746
1895	717,840,930	1,044,159,111	264,205,747	453,037,227
1896	397,727,228	807,736,470	181,199,140	340,180,465
1897	652,631,527	1,018,756,612	212,711,809	363,398,537
1898	803,364,307	1,188,463,539	363,783,230	386,960,814
1899	1,076,523,680	954.532,672	308,849,886	324,713,270
1900	831,892,161	861,017,726	356,258,619	294,020,487
1901	899,884,174	1,017,601,150	377,510,576	339,907,038
1902	999,878,542	997,114,012	411,618,813	358,493,816
1903	915,218,164	1,080,168,838	503,335,912	303,154,381
1904	985,213,084	888,006,414	414,180,457	232,673,900
1905 [a]	1,202,188,122	1,208,982,844	609,930,174	310,326,980

[a] Preliminary returns.

COMPARISON OF PORTS FOR 1905.

The preliminary returns for 1905, as shown in Table 6, indicate the largest exports of cotton on record and show important gains in the exports from the Pacific Coast, San Francisco exporting almost as much as Mobile, and the cities on Puget Sound more than Charleston and Philadelphia together. The total exports from the Pacific Coast were 164,000,000 pounds. The leading ports in order of the magnitude of their exports of cotton in 1905 were New Orleans, Galveston, Savannah, New York, Wilmington (N. C.), Boston, Pensacola, Baltimore, Mobile, Brunswick (Ga.), San Francisco, and the ports on Puget Sound.

TABLE 6.—*Quantity and percentage of domestic cotton exported from leading ports, 1905.*[a]

Customs district.	Year ending June 30, 1905.		Customs district.	Year ending June 30, 1905.	
ATLANTIC.	*Pounds.*	*P. ct.*	GULF—continued.	*Pounds.*	*P. ct.*
Boston and Charlestown	104,297,637	2.42	New Orleans	1,208,982,844	28.10
New York	310,326,980	7.21	Galveston	1,202,188,122	27.94
Philadelphia	30,497,037	.71			
Baltimore	88,552,761	2.06	Total Gulf	2,602,715,603	60.49
Newport News	11,676,040	.27			
Norfolk and Portsmouth	10,683,284	.25	PACIFIC.		
Wilmington, N. C	172,803,193	4.02			
Charleston	39,674,353	.92	San Francisco	80,118,314	1.86
Savannah	609,930,174	14.18	Puget Sound	76,487,921	1.78
Brunswick	81,878,848	1.90	Willamette	7,487,243	.17
Other Atlantic	2,880,276	.07			
			Total Pacific	164,093,478	3.81
Total Atlantic	1,463,200,583	34.01			
			All other	72,737,622	1.69
GULF.					
			Total exports	4,302,747,286	100.00
Pensacola	103,155,832	2.40			
Mobile	88,388,805	2.05			

[a] Preliminary returns.

WHEAT.

SHIFTING OF PRODUCTION AND EXPORT.

Domestic wheat exported from the Atlantic and Gulf ports comes chiefly, if not entirely, from the States east of the Rocky Mountains. The States producing the most wheat in 1904 were Minnesota, Kansas, North Dakota, South Dakota, and Nebraska. The next States in order of production were Missouri, Pennsylvania, Illinois, and Ohio. The quantity of wheat produced in each of these States for the three years ending with 1904 is shown in Table 7.

TABLE 7.—*Production of wheat in the United States, 1902–1904.*

State.	1902.	1903.	1904.
	Bushels.	*Bushels.*	*Bushels.*
Minnesota	79,752,404	70,652,597	68,344,256
Kansas	45,827,495	87,249,557	65,019,471
North Dakota	62,872,241	55,240,580	53,892,193
South Dakota	43,973,033	47,252,994	31,556,784
Nebraska	52,726,451	42,157,560	31,453,943
Missouri	56,266,494	22,194,614	27,163,141
Pennsylvania	24,628,171	26,038,444	21,857,961
Illinois	32,601,932	16,571,940	21,542,421
Ohio	36,333,379	28,303,515	17,563,478
Total	434,981,600	395,661,801	338,393,648
All other States	235,081,408	242,160,034	214,005,869
The United States	670,063,008	637,821,835	552,399,517

In considering the quantity of wheat produced in these States the amount required for home consumption is an element to be noted. The estimated per capita consumption of wheat in the United States for the fiscal years 1902–1904, inclusive, was 6.23 bushels, including the amount required for seed. At this rate the quantity required for consumption in Pennsylvania in each of these years would be about 41,000,000 bushels, in Illinois 32,000,000, and in Ohio 27,000,000. It will be seen from Table 7 that in each of these States the total quantity of wheat produced in the three years did not equal the estimated quantity required for consumption in that time.

In Missouri, however, there was an excess of production over estimated requirements, while in the first five States in the list the production far exceeded the estimated requirements for home use. It is to be understood that these estimates of the consumption in individual States are made merely for the purpose of showing, in a rough way, in what States the production of wheat far exceeds the home requirements. The actual per capita consumption in one State might be considerably more or considerably less than in another State and might not be near the estimated average per capita consumption (6.23 bushels) for the entire United States. However, from the rough estimates just made it is safe to assume that the production of wheat in the first five States named is far in excess of any possible home requirements.

TRADE CENTERS.

It is, then, in the country lying west of the Mississippi River, north of Oklahoma, and east of the Rocky Mountains that most of the surplus wheat of the United States is produced. From the fields of this region, as well as from others where the production is relatively smaller, wheat is gathered in large quantities into certain trade centers. Owing to the great quantity of flour manufactured in that city, the receipts of wheat at Minneapolis are larger than those of any other city in the United States. The receipts of wheat during the calendar year 1904 at Minneapolis amounted to 87,000,000 bushels, or 19,000,000 bushels more than were produced that year in Minnesota. At Kansas City, the second wheat center of the United States, the receipts in 1904 were 39,000,000 bushels. At the other four cities named in Table 8—Duluth, Buffalo, Chicago, and St. Louis—the receipts were from 23,000,000 bushels to 27,000,000 bushels each.

TABLE 8.—*Receipts of wheat at interior cities, 1899–1904.*[a]

City.	Year ending December 31—						
	1899.	1900.	1901.	1902.	1903.	Average 1899–1903.	1904.
	Bushels.	*Bushels.*	*Bushels.*	*Bushels.*	*Bushels.*	*Bushels.*	*Bushels.*
Minneapolis	87,961,630	83,312,320	90,838,570	88,762,120	86,804,070	87,535,742	86,935,980
Kansas City	20,363,850	34,775,450	26,952,800	24,018,400	38,322,000	28,886,500	39,159,900
Duluth	54,981,948	31,964,324	47,000,965	42,406,923	29,091,142	41,089.060	26,635,205
Buffalo	48,008,014	47,826,458	61,294,248	62,452,696	40,455,328	52,007,349	26,270,000
Chicago	30,971,547	48,048,298	51,197,870	37,940,953	34,955,867	40,622,907	24,457,347
St. Louis	10,428,163	19,786,614	20,860,805	30,667,212	23,398,800	21,028,319	23,148,133

[a] Compiled from Fiftieth Annual Report, Baltimore Chamber of Commerce, 1905.

A matter of importance to be noticed in Table 8 is the marked increase in the receipts of wheat at Kansas City and St. Louis, the absence of any increase at Minneapolis and Chicago, and the actual decline at Duluth. It appears, therefore, that the growth in the wheat centers is taking place rather in the Southwest than in the North. The receipts of wheat flour at the leading trade centers in the interior, as shown in Table 9, are greatest at Minneapolis and next at Chicago, while those at Kansas City and St. Louis appear comparatively small.

TABLE 9.—*Receipts of wheat flour at interior cities, 1899–1904.*[a]

City.	Year ending December 31—						
	1899.	1900.	1901.	1902.	1903.	Average 1899–1903.	1904.
	Barrels.	*Barrels.*	*Barrels.*	*Barrels.*	*Barrels.*	*Barrels.*	*Barrels.*
Minneapolis	14,488,512	15,305,827	16,712,659	16,506,345	15,874,436	15,777,556	14,004,828
Chicago	7,015,884	10,588,367	11,512,285	8,657,131	8,637,505	9,282,234	9,589,220
Buffalo	9,088,873	11,463,079	11,053,439	12,026,616	11,243,027	10,975,007	6,160,965
Duluth	6,337,850	4,865,000	5 645,905	8,717,385	4,729,300	6,059,088	3,735,320
Milwaukee	4,902,931	3,012,625	2,919,300	3,681,400	3,307,915	3,564,834	3,622,316
St. Louis	1,514,315	1,869,070	2,170,548	2,217,685	2,340,695	2,022,463	2,355,560
Kansas City	(*b*)	(*b*)	1,430,634	1,298,359	1,535,460	[c] 1,421,484	1,595,106
Cincinnati	2,154,374	2,561,977	3,031,743	2,408,058	1,553,704	2,341,971	1,524,700
Toledo	1,065,281	2,287,364	1,730,416	2,300,000	1,933,000	1,863,212	(*b*)

[a] Compiled from Fiftieth Annual Report, Baltimore Chamber of Commerce, 1905.
[b] Not reported.
[c] Average for three years, 1901–1903.

Somewhat different in character from these important interior points of concentration is Buffalo. At Chicago, St. Louis, and other centers wheat is collected almost directly from the various railroad stations near the wheat fields, but at Buffalo the receipts of grain are from western trade centers, such as Chicago, Duluth, and Toledo, and the grain received at Buffalo to a large extent is forwarded to New York and other Atlantic seaports.

ROUTES TO THE ATLANTIC COAST.

There are two general directions which wheat from the regions of surplus production may take to the seaboard, and these two directions are marked by two lines of waterways—the Great Lakes and the Mississippi River. Wheat from Duluth may be shipped down the Lakes to Buffalo or to Montreal. At Buffalo it may be shipped to New York by rail or transferred to a canal boat and towed down the Erie Canal to the Hudson River and down the Hudson to New York Harbor. Wheat may also be shipped by this route from Chicago and grain centers on the lower Great Lakes.

Running in the same general direction as this water route are many railroads, all of which carry more or less grain. One route from Duluth follows the Duluth, South Shore and Atlantic Railway to Sault Ste. Marie, and there takes the Canadian Pacific Railway to Montreal or crosses the border into the United States again, and finds its way to the coast at Portland, Boston, or New York.

COMPARISON OF DISTANCES.

The distance from Duluth to Portland by this route, passing through Montreal and by way of the Maine Central Railroad, is about 1,330 miles, and the distance to Boston over the same general route, but by way of Newport, Vt., is about 1,400 miles.

If the Duluth grain be carried over one of the shorter lines of railroad to Baltimore by way of Chicago, the distance from Duluth to the seaboard would be about 1,280 miles. Chicago is nearer Baltimore by rail than any other important Atlantic seaport, the distance being 802 miles. The distance from Chicago to New Orleans over the Illinois Central Railroad is about 914 miles.

The nearest seaport by rail to St. Louis is Mobile. The distance from St. Louis to Mobile over the Mobile and Ohio Railroad is only 644 miles, while the Atlantic port nearest to St. Louis is Baltimore, which is about 930 miles distant, by way of the Baltimore and Ohio lines.

The nearest seaboard outlet for the grain gathered in at Kansas City is Port Arthur, Tex., almost due south of Kansas City. Of the larger ports the nearest to Kansas City is Galveston, Tex. The distance from Kansas City to this seaport by way of the Frisco System is 873 miles.[a]

The distance in a straight line from Chicago to the nearest important Atlantic seaport is about 610 miles, and the approximate distance from Chicago to the nearest Gulf port is 770 miles. Kansas City is about 110 miles nearer the Gulf in a straight line and about 290 miles farther away from its nearest Atlantic seaport than is Chicago.

The distance in a straight line from Chicago to Portland, Me., is about 890 miles, and from Kansas City to Portland the distance is about 1,300 miles. Baltimore is the nearest Atlantic port to Chicago, measured in a straight line, and Mobile the nearest Gulf port to Chicago. All the ports on the Atlantic Coast from New York to Savannah, inclusive, are nearer Chicago than is any Gulf port, with the possible exception of Mobile, which is about the same distance from Chicago as Savannah; so it may be said, in general, that Chicago is located nearer the Atlantic Coast, while Kansas City is nearer the Gulf. Galveston is the nearest important seaport in a straight line to Kansas City, and the nearest Atlantic port to Kansas City is Savannah, about 900 miles away.

TABLE 10.—*Straight-line distances from Chicago and Kansas City to leading Atlantic and Gulf ports.*

To—	Approximate distance—		To—	Approximate distance—	
	From Chicago, Ill.	From Kansas City, Mo.		From Chicago, Ill.	From Kansas City, Mo.
	Miles.	*Miles.*		*Miles.*	*Miles.*
Portland, Me	890	1,300	Wilmington, N. C.	750	980
Boston	850	1,240	Charleston	760	930
New York	710	1,100	Savannah	770	900
Philadelphia	660	1,040	Pensacola	790	730
Baltimore	610	960	Mobile	770	690
Newport News	690	1,000	New Orleans	830	680
Norfolk	700	1,010	Galveston	950	660

---

[a] Distances just given were taken from the Railroad Gazette, February 24, 1905, pp. 162–163, and from the Official Guide of the Railways of the United States.

Table 10 shows the approximate distances in a straight line of Chicago and of Kansas City from each of the leading Atlantic and Gulf ports. The actual distances by rail between the points named are of course longer. Not only does distance affect the cost to the railroads of carrying grain, but the grades of the railroads also enter into the cost of operation. The roads that follow the shores of the Great Lakes have easier grades—that is, their tracks are much more level—than those that cross the Allegheny Mountains, while the railroads that extend from the wheat country west of the Mississippi River down to the Gulf ports are also generally more level than those which cross the Allegheny Mountains.

WATER ROUTES.

Another item affecting the movement of grain is the competition, either actual or potential, of water routes. The water route of the Great Lakes is used to a large extent in transferring grain from the wheat fields down to the Atlantic Coast.

The Mississippi River is also a route used for carrying grain from the wheat country down to the Gulf of Mexico, but during 1904 very little grain was actually shipped this way—practically none from St. Louis to New Orleans.

While distance does not determine the direction of the shipment of grain from interior cities to the different seaports, it is interesting to know how far a given center of the wheat trade is from the seaboard outlet of that trade; for, whether the rates charged depend upon the distance or not, it is evident that the actual cost to the carrier is affected at least to some extent by the distance traveled. The rates charged by the carriers to the shippers are important, if not all-important, factors in determining the direction of the trade.

WHEAT EXPORTS BY CUSTOMS DISTRICTS.

The exports of wheat by customs districts for the four periods of five years each ending with 1903 and for the fiscal year 1904 are shown in Table 11. The rapid increase both in the actual quantity of wheat shipped and also in the percentage of the total from the Gulf ports, especially from Galveston, is one of the most noteworthy features shown in this table. The average annual shipment of wheat from the Atlantic ports from 1884 to 1888 was 45,000,000 bushels and during 1889–1893, 60,000,000 bushels. For the Gulf ports the average annual exports for 1884–1888 were 2,000,000 bushels, and for 1889–1893, 29,000,000 bushels. In 1904 the Atlantic ports exported 9,000,000 bushels, while the Gulf ports exported 24,000 000 bushels, 17,000,000 of which were shipped from Galveston.

TABLE 11.—*Quantity and percentage of domestic wheat exported from leading ports for years ending June 30, 1884–1904.*

Customs district.	Annual average.								1904.	
	1884–1888.		1889–1893.		1894–1898.		1899–1903.			
	Bushels.	Per cent.	Bushels.	Per cent.	Bushels.	Per cent.	Bushels.	Per cent.	Bushels.	Per cent.
ATLANTIC.										
Portland and Falmouth	50,549	0.07	-----	-----	125,494	0.14	1,833,424	1.43	336,567	0.76
Boston and Charlestown	1,584,139	2.08	2,264,647	2.63	6,972,528	7.70	11,757,922	9.15	1,427,689	3.23
New York	26,761,455	35.16	27,332,121	31.76	25,177,101	27.79	25,557,621	19.89	3,430,330	7.76
Philadelphia	5,294,382	6.96	4,496,889	5.22	3,985,117	4.40	6,768,498	5.27	944,238	2.13
Baltimore	10,659,583	14.00	9,915,818	11.52	10,043,269	11.09	11,014,729	8.57	2,624,923	5.93
Newport News[a]	867,523	1.14	1,093,265	1.27	1,577,031	1.74	2,691,645	2.09	160,000	.36
Norfolk and Portsmouth	38,768	.05	427,851	.50	282,745	.31	286,798	.22	-----	-----
Other Atlantic	1,744	.01	11	(b)	101,165	.11	145,289	.12	4	.01
Total Atlantic	45,258,143	59.47	45,530,602	52.90	48,264,450	53.28	60,055,926	46.74	8,923,751	20.18
GULF.										
New Orleans	1,636,202	2.15	7,251,499	8.42	5,986,555	6.61	14,470,579	11.26	7,169,706	16.21
Galveston	5,733	.01	393,266	.46	2,917,069	3.22	13,614,024	10.59	17,135,435	38.74
Other Gulf	-----	-----	6	(b)	189,582	.21	726,566	.57	3,940	.01
Total Gulf	1,641,935	2.16	7,644,771	8.88	9,093,206	10.04	28,811,169	22.42	24,309,081	54.96
PACIFIC.										
San Francisco	19,713,214	25.90	21,532,252	25.02	16,137,534	17.81	10,465,542	8.14	1,774,431	4.01
Puget Sound	245,558	.32	3,135,825	3.64	4,286,642	4.73	8,075,635	6.28	1,725,073	3.90
Willamette	4,600,221	6.04	4,031,372	4.68	7,896,691	8.72	10,631,364	8.27	3,476,453	7.86
Other Pacific	807,945	1.07	699,202	.82	342,827	.38	70,680	.07	40,241	.09
Total Pacific	25,366,938	33.33	29,398,651	34.16	28,663,694	31.64	29,243,221	22.76	7,016,198	15.86
All other	3,837,613	5.04	3.493,037	4.06	4,570,909	5.04	10,385,963	8.08	3,981,139	9.00
Total exports	76,104,629	100.00	86,067,061	100.00	90,592,259	100.00	128,496,279	100.00	44,230,169	100.00

[a] The figures for 1884–1888 refer to Yorktown, formerly the leading port of the present Newport News customs district. The name of the customs district was changed to Newport News by the act of October 12, 1888.

[b] Less than 0.005 per cent.

The exports of wheat from New York during the four periods mentioned showed but little variation, the average being about 27,000,000 bushels per year for the twenty years. In 1904 the wheat exports from New York declined to 3,000,000 bushels. Baltimore also showed but a small change during the twenty years ending with 1903. The average for the first five-year period was 11,000,000 bushels and for the last five the same, and for the other two five-year periods 10,000,000 bushels. In 1904 the exports from Baltimore were about 3,000,000 bushels.

Of the Gulf ports New Orleans was the principal wheat exporter during 1884–1905, except in 1899, 1900, and 1904, when Galveston took the lead. The percentage for New Orleans for the five years 1899–1903 was 11.26, and that of Galveston almost as much—10.59.

The exports from Pacific ports are shown in Table 11 for purposes of comparison. It will be seen that during the first fifteen years shown in the table the exports from the Pacific Coast were about one-third of the total exports from the United States, in 1899–1903 they were somewhat less than one-fourth, and in 1904 less than one-sixth of the total. During 1905, however, more than nine-tenths of the wheat exported from the United States was shipped from the Pacific Coast.

EXPORTS OF FOUR LEADING PORTS.

The exports of wheat from 1884 to 1905 for the four leading Atlantic and Gulf ports are shown in Table 12. This table shows more in detail the rapid increase of the grain exports from Galveston.

TABLE 12.—*Quantity of domestic wheat exported from New York, Baltimore, New Orleans, and Galveston, 1884–1905.*

Year ending June 30—	New York.	Baltimore.	New Orleans.	Galveston.
	Bushels.	*Bushels.*	*Bushels.*	*Bushels.*
1884	20,445,269	15,734,281	648,337	26,544
1885	26,345,661	13,237,600	1,590,124	2,120
1886	21,230,928	3,699,310	30,702	----------
1887	40,563,930	13,903,298	4,345,553	----------
1888	25,221,487	6,723,425	1,566,297	----------
1889	9,086,407	3,383,945	960,949	----------
1890	13,438,210	6,363,376	2,433,529	----------
1891	12,860,036	3,753,969	2,357,242	----------
1892	61,755,379	21,858,840	15,947,382	783,975
1893	39,519,574	14,218,961	14,558,392	1,182,357
1894	30,604,256	11,275,247	6,881,547	391,980
1895	20,793,512	7,679,975	1,860,642	53,055
1896	18,994,834	3,183,754	1,149,108	20,834
1897	18,970,646	6,462,179	3,133,192	3,499,482
1898	36,522,258	21,615,191	16,908,287	10,619,995
1899	42,075,878	15,124,567	12,374,697	14,252,037
1900	23,108,101	7,478,600	8,330,672	13,561,839
1901	23,063,534	7,857,768	15,078,322	14,010,378
1902	22,137,184	17,765,448	18,732,850	9,937,025
1903	17,403,409	6,847,262	17,836,356	16,308,842
1904	3,430,330	2,624,923	7,169,706	17,135,435
1905 [a]	81,590	116,040	5,999	56,000

[a] Preliminary returns.

EXPORT DECLINE AND PRODUCTION.

The exports of wheat from the United States during 1905 were the smallest since 1860, and the total exports of wheat and flour, reduced to terms of grain, were the smallest since 1872. The wheat exported from the Pacific Coast during 1905, as appears in Table 16, was more than 4,000,000 bushels, while the exports from all the Atlantic and Gulf ports amounted to less than 300.000 bushels.

This does not necessarily indicate a decline in the wheat industry of the United States, for the average farm price of wheat on December 1, 1904, was 92.4 cents per bushel, the highest farm price on December 1 since 1888, and the crop harvested in 1904 was by no means a small one. In fact, it was exceeded by only four crops during the ten years ending with 1904 and was larger than five other crops during those years. The only crops which were greater than that of 1904 during the ten years mentioned were those of 1898, 1901, 1902, and 1903. The great difference during 1905 between the exports from the Pacific Coast and those from the Atlantic and Gulf coasts illustrates to some extent the distinct character of the Pacific Coast wheat trade and helps to justify the separate treatment of the Atlantic and Gulf grain trade in this bulletin. The Pacific Coast trade is distinct and important enough to require separate treatment.

The Atlantic port from which the largest quantity of wheat was exported during the fiscal year 1905 was Baltimore, but the amount shipped was only 116,000 bushels, a quantity easily stowed away in the holds of two ocean liners, with space enough left in each for a large miscellaneous cargo besides.

EXPORTS OF WHEAT FLOUR.

The exports of wheat flour for the twenty-one fiscal years ending with 1904 appear in Table 13. About one-fifth of the flour exported during 1904 went from Pacific ports, and 63 per cent from Atlantic ports. The Gulf cities shipped only 12 per cent of the total flour exports of the United States. This, however, was a large increase over the previous years, the exports from the Gulf ports for 1899–1903 being less than 6 per cent of the total from all ports. The explanation of this increase may be found in the improved methods of caring for flour in the warm climate of the Gulf Coast, especially at the port of New Orleans. It will be noted that the exports of flour from New Orleans increased from 3 per cent in 1899–1903 to 7 per cent in 1904. Of the ports on the Atlantic Coast the principal ones in the export flour trade are New York, Baltimore, and Philadelphia. New York held first place during all the twenty-one years mentioned. Newport News experienced a large growth in flour exports during the ten years ending with 1903, but suffered a decline in 1904.

TABLE 13.—*Quantity and percentage of domestic wheat flour exported from leading ports for years ending June 30, 1884–1904.*

Customs district.	Annual average.								1904.	
	1884–1888.		1889–1893.		1894–1898.		1899–1903.			
	Barrels.	Per cent.	Barrels.	Per cent.	Barrels.	Per cent.	Barrels.	Per cent.	Barrels.	Per cent.
ATLANTIC.										
Portland and Falmouth	67,639	0.66	34,283	0.26	95,003	0.62	269,134	1.44	76,004	0.45
Boston and Charlestown	1,975,917	19.20	1,556,749	12.02	1,539,804	10.04	1,397,344	7.49	670,915	3.95
New York	3,926,484	38.15	4,432,583	34.22	5,275,996	34.41	4,381,137	23.48	3,788,045	22.28
Philadelphia	514,412	5.00	1,075,087	8.30	1,006,849	6.57	2,284,984	12.24	1,995,303	11.74
Baltimore	1,580,857	15.36	2,767,075	21.36	2,778,342	18.12	3,156,953	16.92	2,970,324	17.47
Newport News[a]	88,660	.86	505,549	3.90	1,312,391	8.56	2,000,085	10.72	925,442	5.44
Norfolk and Portsmouth	4,709	.05	47,015	.36	56,759	.37	295,738	1.58	183,836	1.08
Other Atlantic	174,378	1.68	55,807	.44	53,794	.34	107,393	.57	154,006	.91
Total Atlantic	8,333,056	80.96	10,474,148	80.86	12,118,938	79.03	13,892,768	74.44	10,763,875	63.32
GULF.										
New Orleans	36,022	.35	87,369	.67	207,172	1.35	606,338	3.25	1,134,020	6.67
Galveston	1,356	.01	15,355	.12	75,489	.49	182,262	.98	539,956	3.18
Other Gulf	55,713	.54	63,277	.49	106,162	.70	258,757	1.38	327,402	1.92
Total Gulf	93,091	.90	166,001	1.28	388,823	2.54	1,047,357	5.61	2,001,378	11.77
PACIFIC.										
San Francisco	1,061,759	10.32	1,059,800	8.18	905,720	5.91	991,493	5.31	771,868	4.54
Puget Sound	43,150	.42	101,781	.79	435,188	2.84	1,216,827	6.52	1,714,864	10.09
Willamette	321,651	3.13	412,723	3.19	472,638	3.08	735,165	3.94	917,191	5.39
Other Pacific	17,550	.16	30,017	.23	1,959	.01	14,564	.08	90	(b)
Total Pacific	1,444,110	14.03	1,604,321	12.39	1,815,505	11.84	2,958,049	15.85	3,404,013	20.02
All other	422,077	4.11	709,115	5.47	1,010,489	6.59	764,136	4.10	830,166	4.89
Total exports	10,292,334	100.00	12,953,585	100.00	15,333,755	100.00	18,662,310	100.00	16,999,432	100.00

[a] The figures for 1884–1888 refer to Yorktown, formerly the leading port of the present Newport News customs district. The name of the customs district was changed to Newport News by the act of October 12, 1888.

[b] Less than 0.005 per cent.

EXPORTS OF FIVE LEADING PORTS.

The exports of flour from the five leading ports on the Atlantic and Gulf coasts for the years 1884–1905 are shown in Table 14. The largest exports by any one port in any one year were made by New York in 1894, the quantity being 7,000,000 barrels. In this table the flour trade of Newport News is shown to have increased about 300,000 barrels from 1894 to 1895 and to have exceeded 2,400,000 barrels in the year 1901. From this date on the exports of flour from Newport News declined and in 1905 they amounted to 400,000 barrels. The increase in the exports from New Orleans from 1896 to 1897 was about 200,000 barrels, an increase amounting to about 200 per cent of the preceding year's exports. In 1903 the exports of flour from New Orleans were about double the previous year and, up to that time, were the largest on record for that city; and this large export trade was followed in 1904 by an increase.

TABLE 14.—*Quantity of domestic wheat flour exported from New York, Baltimore, Philadelphia, Newport News, and New Orleans, 1884–1905.*

Year ending June 30—	New York.	Baltimore.	Philadelphia.	Newport News.	New Orleans.
	Barrels.	*Barrels.*	*Barrels.*	*Barrels.*	*Barrels.*
1884	3,830,841	399,092	315,491	[a]111,185	32,572
1885	4,233,693	1,040,222	705,126	[a]54,901	25,430
1886	3,166,274	910,135	421,305	[a]33,132	24,832
1887	3,976,051	2,618,507	422,064	[a]76,094	54,125
1888	4,425,563	2,936,331	708,074	[a]167,990	43,152
1889	3,335,195	1,835,752	488,868	57,749	31,646
1890	4,228,255	3,001,225	876,682	277,220	44,219
1891	3,574,982	2,360,768	837,296	490,272	33,184
1892	4,977,094	3,251,612	1,686,861	995,822	195,532
1893	6,047,391	3,386,017	1,485,726	706,681	132,262
1894	6,944,500	3,362,951	1,291,032	796,406	112,644
1895	5,281,386	2,624,749	1,193.064	1,131,040	114,281
1896	4,574,126	2,644,382	706,486	1,235,981	99,444
1897	4,651,297	2,668,516	620,514	1,668,441	321,298
1898	4,928,673	2,591,113	1,223,147	1,730,085	388,191
1899	4,723,980	3,370,948	2,151,482	1,691,353	380,698
1900	4,631,999	3,050,013	1,987,848	2,081,252	388,175
1901	4,141,583	3,098,376	2,280,485	2,443,475	598,281
1902	3,870,855	3,096,758	2,300,144	2,165,619	553,172
1903	4,537,270	3,168,668	2,704,963	1,618,727	1,111,362
1904	3,788,045	2,970,324	1,995,303	925,442	1,134,020
1905[b]	2,030,001	764,386	985,080	445,764	248,857

[a] Yorktown.

[b] Preliminary returns.

CANADIAN WHEAT FLOUR.

But for the wheat brought into this country from Canada to be ground into flour for foreign markets, the exports of flour from the United States in 1905 would have been smaller. The effect of this Canadian wheat, ground in the mills of this country during the fiscal year 1905 and exported as domestic flour, may be inferred to some degree by the figures in Table 16. The Atlantic ports received 53 per cent of the export trade in flour and 7 per cent of the trade went to the Gulf ports, while in the wheat trade the Atlantic ports and the Gulf ports together received only 6 per cent of the total for all ports.

TABLE 15.—*Quantity and percentage of domestic wheat, including flour,*[a] *exported from leading ports for years ending June 30, 1884–1904.*

Customs district.	Annual average.								1904.	
	1884–1888.		1889–1893.		1894–1898.		1899–1903.			
	Bushels.	Per cent.	Bushels.	Per cent.	Bushels.	Per cent.	Bushels.	Per cent.	Bushels.	Per cent.
ATLANTIC.										
Portland and Falmouth	354,925	0.29	154,274	0.11	553,008	0.35	3,044,527	1.43	678,585	0.56
Boston and Charlestown	10,475,765	8.56	9,270,017	6.42	13,901,646	8.71	18,045,970	8.49	4,446,807	3.68
New York	44,430,633	36.29	47,278,745	32.75	48,919,083	30.65	45,272,737	21.31	20,476,532	16.96
Philadelphia	7,609,236	6.22	9,334,781	6.47	8,515,937	5.34	17,050,926	8.02	9,923,102	8.22
Baltimore	17,773,439	14.52	22,367,656	15.49	22,545,808	14.13	25,221,017	11.87	15,991,381	13.25
Newport News[b]	1,266,493	1.03	3,368,235	2.33	7,482,791	4.69	11,692,027	5.50	4,324,489	3.58
Norfolk and Portsmouth	59,958	.05	639,419	.44	538,161	.34	1,617,619	.76	827,262	.69
Other Atlantic	786,446	.64	251,141	.18	343,237	.20	628,559	.31	693,031	.57
Total Atlantic	82,756,895	67.60	92,664,268	64.19	102,799,671	64.41	122,573,382	57.69	57,361,189	47.51
GULF.										
New Orleans	1,798,301	1.47	7,644,659	5.30	6,918,829	4.34	17,199,100	8.09	12,272,796	10.17
Galveston	11,835	.01	462,364	.32	3,256,769	2.04	14,434,203	6.79	19,565,237	16.21
Other Gulf	250,709	.20	284,752	.19	667,312	.41	1,890,972	.90	1,477,249	1.22
Total Gulf	2,060,845	1.68	8,391,775	5.81	10,842,910	6.79	33,524,275	15.78	33,315,282	27.60
PACIFIC.										
San Francisco	24,491,130	20.01	26,301,352	18.22	20,213,274	12.67	14,927,260	7.03	5,247,837	4.35
Puget Sound	439,733	.36	3,593,839	2.49	6,244,988	3.91	13,551,357	6.38	9,441,961	7.82
Willamette	6,047,651	4.94	5,888,626	4.08	10,023,562	6.28	13,939,606	6.56	7,603,813	6.30
Other Pacific	886,919	.72	834,278	.58	351,642	.22	136,218	.06	40,645	.03
Total Pacific	31,865,433	26.03	36,618,095	25.37	36,833,466	23.08	42,554,441	20.03	22,334,256	18.50
All other	5,736,959	4.69	6,684,055	4.63	9,118,110	5.72	13,824,576	6.50	7,716,886	6.39
Total exports	122,420,132	100.00	144,358,193	100.00	159,594,157	100.00	212,476,674	100.00	120,727,613	100.00

[a] Flour reduced to wheat, with 4½ bushels of wheat equivalent to 1 barrel of flour.

[b] The figures for 1884-1888 refer to Yorktown, formerly the leading port of the present Newport News customs district. The name of the customs district was changed to Newport News by the act of October 12, 1888.

EXPORTS OF WHEAT AND FLOUR.

Table 15 shows the total exports of domestic wheat, including flour, from the leading ports for the twenty-one years ending with 1904. This table shows New York to be the leading port from which the wheat and flour were exported in 1904 and Galveston the second.

The increase of the wheat and flour trade of the Gulf ports also appears in this table. The percentage of wheat and flour exported from that coast in 1904 amounted to 28 per cent; in 1899–1903 to 16 per cent, and during the previous five-year period, only 7 per cent. In the combined wheat and flour trade in 1905 Mobile ranked first among the Gulf ports, owing to the large increase of its flour exports and to the diminution of the wheat exports at New Orleans and Galveston.

Table 16.—*Quantity and percentage of domestic wheat and wheat flour exported from leading ports during the year ending June 30, 1905.*[a]

Customs district.	Wheat.		Wheat flour.		Wheat and flour.[b]	
	Bushels.	*Per cent.*	*Barrels.*	*Per cent.*	*Bushels.*	*Per cent.*
ATLANTIC.						
Portland and Falmouth			5,161	0.06	23,224	0.05
Boston and Charlestown			357,586	4.08	1,609,137	3.67
New York	81,590	1.86	2,030,001	23.18	9,216,594	21.04
Philadelphia	8,000	.18	985,080	11.25	4,440,860	10.14
Baltimore	116,040	2.64	764,386	8.73	3,555,777	8.12
Newport News			445,764	5.09	2,005,938	4.58
Norfolk and Portsmouth			63,777	.73	286,996	.66
Total Atlantic	205,630	4.68	4,651,755	53.12	21,138,526	48.26
GULF.						
Mobile	50	.01	360,561	4.12	1,622,574	3.71
New Orleans	5,999	.13	248,857	2.84	1,125,855	2.57
Galveston	56,000	1.27	5,419	.06	80,386	.18
Total Gulf	62,049	1.41	614,837	7.02	2,828,815	6.46
PACIFIC.						
San Francisco	1,315,477	29.96	676,636	7.73	4,360,339	9.96
Puget Sound	1,246,616	28.39	1,609,173	18.37	8,487,894	19.38
Willamette	1,474,147	33.57	766,858	8.76	4,925,008	11.24
Total Pacific	4,036,240	91.92	3,052,667	34.86	17,773,241	40.58
All other	87,142	1.99	437,656	5.00	2,056,594	4.70
Total exports	4,391,061	100.00	8,756,915	100.00	43,797,176	100.00

[a] Preliminary returns.

[b] Flour reduced to wheat, with 4½ bushels of wheat taken as equivalent to 1 barrel of flour.

The total wheat, including flour, exported from the United States in 1905 amounted to 44,000,000 bushels. This, as has been noted, includes a considerable amount of Canadian wheat in the form of flour, and classed as domestic flour because it was ground at mills in the United States. During the fiscal year 1905 the percentage of wheat, including wheat flour, exported from the Gulf ports declined to 6 per cent and from the Atlantic ports the percentage was 48, just about what it was in the preceding year.

CORN.

AREA OF THE SURPLUS DEFINED.

The greater part of the corn crop of the United States is produced in the Mississippi Valley south of the lower limits of the Great Lakes and the southern boundaries of Minnesota and South Dakota and north of the Ohio River and the northern boundaries of Arkansas and Oklahoma. The production of this region, together with the crop of Texas, amounted in 1904 to 1,574,000,000 bushels. In 1902, 1903, and 1904 Illinois was the leading State in the production of corn, and Iowa was second. The crop of Iowa in 1904 was about twice the crop of Missouri, and Nebraska produced nearly twice as much corn as Kansas. In view of the great production of wheat in Kansas, the corn crops of that State during the three years 1902–1904 were large. The region occupied by the States of Illinois, Iowa, Missouri, and Nebraska may be regarded as the center of the corn belt—that is, of the principal corn-producing region of the United States. These four States in 1904, as is shown in Table 17, produced more than 1,000,000,000 bushels of corn.

TABLE 17.—*Production of corn in the United States, 1902–1904.*

State.	1902.	1903.	1904.
	Bushels.	*Bushels.*	*Bushels.*
Illinois	372,436,416	264,087,431	344,133,680
Iowa	297,686,016	229,218,220	303,039,266
Nebraska	252,520,173	172,379,532	260,942,335
Missouri	264,232,605	202,839,584	151,522,643
Indiana	171,332,142	142,580,886	143,396,852
Texas	44,867,415	140,750,733	136,702,699
Kansas	222,805,621	171,687,014	134,609,669
Ohio	121,608,512	88,095,757	99,628,555
Total	1,747,488,900	1,411,639,157	1,573,975,699
All other States	776,159,412	832,537,768	893,505,235
The United States	2,523,648,312	2,244,176,925	2,467,480,934

North of the corn belt the production of this grain was relatively small, but south of the corn belt considerable crops were raised. In 1904 the corn crop of Wisconsin was 45,000,000 bushels; South Dakota, 44,000,000 bushels; Minnesota, 42,000,000 bushels; Michigan, 37,000,000 bushels, and North Dakota, about 2,000,000 bushels. The crop of Texas in 1904 amounted to 137,000,000 bushels. Kentucky produced in the same year 87,000,000 bushels; Tennessee, 81,000,000 bushels; Indian Territory, 55,000,000 bushels; Oklahoma, 49,000,000 bushels, and Arkansas, 48,000,000 bushels. The corn crop of the Pacific Coast States in this year was about 2,000,000 bushels.

LIVE STOCK AND ANIMAL PRODUCTS.

Corn appears in the export trade of the United States in the form of grain, and also as an element of value in live stock and animal products. The practice of farmers in sending their corn to market "on the hoof" explains the great difference between the quantity of corn harvested and the quantity received in the form of grain at the various trade centers.

The importance of the live-stock industry of the corn region is illustrated by the number of cattle and hogs received at the principal trade centers of that region, as given in Table 18.

TABLE 18.—*Number of cattle and hogs received at important trade centers during the year ending December 31, 1904.*[a]

City.	Cattle.	Hogs.
Chicago	3,259,185	7,238,746
Kansas City	1,996,610	2,227,170
St. Louis	1,261,942	2,361,623
Omaha	944,192	2,299,627

[a] Monthly Summary of Commerce and Finance of the United States, December, 1904, p. 2044.

A large proportion of these animals are butchered in the cities where they are received. According to the Cincinnati Price Current,[a] the number of hogs packed in each of the four cities just named during the year ending March 1, 1905, was as follows:

Chicago	5,990,430
Kansas City	2,890,962
South Omaha	2,054,464
St. Louis	1,908,592

From the trade centers for cattle and hogs large quantities of packing-house products are sent to the seaports to be forwarded to foreign countries. This movement, although closely related to the corn industry, will not admit of extensive treatment in this bulletin. The movement of corn in the form of grain from the farm to interior trade centers and through the seaports will be considered here.

PRIMARY MARKETS.

The principal primary market for corn is Chicago. During the six years ending with 1904 an average of 101,000,000 bushels of corn per annum was received at Chicago. This is more than the combined annual receipts at Buffalo, St. Louis, Peoria, Kansas City, and Cincinnati.

Buffalo, the second in importance of the corn centers of the United States, received 15,000,000 bushels less during 1904 than the average during the five-year period 1899–1903. The receipts of corn at Peoria, Ill., in 1904 (mostly for whisky distilling) were more than the receipts at St. Louis. The total receipts of all six cities during 1904, as given in Table 19, although amounting to nearly 200,000,000 bushels, equaled only 8 per cent of the corn crop of the United States.

---

[a] March 30, 1905, p. 203.

TABLE 19.—*Receipts of corn at interior cities, 1899–1904.*[a]

City.	Year ending December 31—						
	1899.	1900.	1901.	1902.	1903.	Average, 1899–1903.	1904.
	Bushels.	*Bushels.*	*Bushels.*	*Bushels.*	*Bushels.*	*Bushels.*	*Bushels.*
Chicago	133,776,350	134,663,456	84,136,637	50,622,907	100,142,341	100,668,338	100,543,207
Buffalo	53,843,327	63,192,660	30,539,848	22,487,454	43,364,979	42,685,654	27,898,000
Peoria	17,061,200	18,595,300	19,604,566	18,276,649	21,034,970	18,914,537	19,576,000
St. Louis	23,344,475	25,613,410	20,834,060	16,024,715	20,990,245	21,361,381	18,246,325
Kansas City	6,759,250	8,334,250	13,488,850	16,092,800	16,282,800	12,191,590	14,187,600
Cincinnati	6,607,090	14,420,798	11,593,425	7,910,048	10,453,465	10,196,965	12,848,217

[a] Compiled from Fiftieth Annual Report, Baltimore Chamber of Commerce, 1905.

ROUTES TO THE SEABOARD.

Corn moves from the trade centers of the interior to the seaboard by practically the same routes as wheat (see p. 20). During the fiscal year 1905 the extremely small quantity of wheat exported from the region east of the Rocky Mountains made corn the leading grain in the export movements for that time and made it especially desirable for the grain-carrying railroads to secure their grain tonnage by carrying corn to the seaboard.

CHANGES IN FREIGHT RATES.

One of the railroads leading from the Missouri River to the Gulf of Mexico reduced the charge for carrying corn near the close of December, 1904, and an increase in the quantity of corn carried by this road was expected. The previous rate on corn from Omaha to Gulf ports was 18 cents per 100 pounds and the new rate was 13.5 cents per 100 pounds. The charge for carrying 100 pounds of corn from Omaha to Baltimore was at that time 24 cents and to New York 25.5 cents. On February 4, 1905, the rate on corn from Omaha to the Gulf was reduced to 11 cents, and from Kansas City to the Gulf the rate was only 10 cents per 100 pounds, or 5.6 cents per bushel. On the same date the railroads connecting the corn belt with the Atlantic coast reduced the corn rate to Baltimore to 11.5 cents per 100 pounds and the rate to New York was reduced to 13 cents. During the month of April, 1905, the rate from the Missouri River to both Atlantic and Gulf ports was increased. The railroad freight rates on corn from Omaha and Kansas City to Gulf and Atlantic ports appear in Table 20. The rates given here are known as "proportional" rates and were charged for corn intended for export. The rates on corn intended for domestic consumption were higher.

Table 20.—*Proportional export freight rates on corn on dates named, 1904–1905.*

[Cents per 100 pounds.]

Date.	From—	To—			
		Gulf ports.	Baltimore.	Philadelphia.	New York.
December 28, 1904	Omaha	18	24	24.5	25.5
	Kansas City	17	24	24.5	25.5
December 29, 1904	Omaha	13.5	24	24.5	25.5
	Kansas City	13.5	24	24.5	25.5
February 4, 1905	Omaha	11	11.5	12	13
	Kansas City	10	11.5	12	13
April 1, 1905	Omaha	18	[a]22.5	[a]23	[a]24
	Kansas City	17	[a]22.5	[a]23	[a]24

[a] April 25, 1905.

CONSEQUENT EFFECT UPON PORTS.

The changes in the percentages of corn exported from the Atlantic and Gulf ports during the winter months of 1904–1905 are results that might have been expected from the reductions in freight rates just mentioned. In December, 1904, 33 per cent of the corn exported from the United States was shipped from the Gulf coast, and during the following month—while the Gulf rates were so much lower than the rates to the Atlantic coast—the percentage of corn shipped from the Gulf ports increased to 42. During February, 1905, the rates to the Atlantic were reduced to a much greater degree than the rates to the Gulf, but the percentage of corn shipped from the Gulf ports that month was 46. During this period of changes in freight rates New York's share of the corn export trade increased from 14 per cent in December to 19 per cent in February, and Boston's trade also increased during January and February.

The Atlantic ports south of New York were the losers at this time. In December, 1904, Baltimore handled 18.3 per cent of the corn exports of the United States, and in February, 1905, only 8.2 per cent. Philadelphia was reduced from 12.1 per cent to 5.2 per cent during the same time, and Newport News and Norfolk also suffered important reductions. Of the Gulf ports, New Orleans handled the most trade. In February, 1904, that port shipped 17.9 per cent of the corn exported from this country, and during the same month in 1905 the percentage shipped from this port was 34.9.

The exports for the winters of 1903–1904 and 1904–1905 are given in Table 21. During the winter of 1903–1904, as the season advanced the percentage of corn exports decreased on the Atlantic Coast and increased on the Gulf, while the reverse was the case during the following winter. The Atlantic cities exported 83.9 per cent in December, 1903, and only 60.1 per cent in December, 1904; so it appears that the movement of corn to the Gulf Coast was already large when the first important reductions of rates were published.

TABLE 21.—*Quantity and percentage of domestic corn exported from leading Atlantic and Gulf ports during the winter months, 1903–1904 and 1904–1905.*

Customs district.	December, 1903.		January, 1904.		February, 1904.	
	Bushels.	Per cent.	Bushels.	Per cent.	Bushels.	Per cent.
ATLANTIC.						
Portland and Falmouth	----------	----------	----------	----------	----------	----------
Boston and Charlestown	175,551	3.8	448,678	8.9	515,546	7.5
New York	1,029.919	22.4	822,684	16.3	803,052	11.8
Philadelphia	366,040	8.0	1,050,448	20.9	1,230,792	18.0
Baltimore	2,022,505	44.0	1,309,947	26.0	1,871,795	27.4
Newport News	244,218	5.3	231,427	4.6	79,204	1.2
Norfolk and Portsmouth	19,621	.4	60,348	1.2	172,026	2.5
Total Atlantic	3,857,854	83.9	3,923,532	77.9	4,672,415	68.4
GULF.						
New Orleans	274,783	6.0	543,189	10.8	1,221,910	17.9
Galveston	186,693	4.1	393,939	7.8	796,343	11.7
Mobile	52,899	1.1	50,295	1.0	34,165	.5
Total Gulf	514,375	11.2	987,423	19.6	2,052,418	30.1
All other ports	223,448	4.9	128,592	2.5	102,471	1.5
Total exports	4,595,677	100.0	5,039,547	100.0	6,827,304	100.0

Customs district.	December, 1904.		January, 1905.		February, 1905.	
	Bushels.	Per cent.	Bushels.	Per cent.	Bushels.	Per cent.
ATLANTIC.						
Portland and Falmouth	----------	----------	161,745	1.0	443,826	3.1
Boston and Charlestown	505,595	6.3	1,199,303	7.3	962,532	6.8
New York	1,127,635	14.0	2,810,750	17.1	2,704,226	19.0
Philadelphia	977,210	12.1	821,706	5.0	738,026	5.2
Baltimore	1,469,161	18.3	2,460,542	15.0	1,165,869	8.2
Newport News	575,712	7.2	1,218,521	7.4	633,812	4.5
Norfolk and Portsmouth	177,108	2.2	107,456	.7	251,535	1.8
Total Atlantic	4,832,421	60.1	8,780,023	53.5	6,899,826	48.6
GULF.						
New Orleans	2,204,061	27.4	5,023,007	30.6	4,953,705	34.9
Galveston	338,565	4.2	1,771,258	10.8	1,455,523	10.3
Mobile	74,951	1.0	92,637	.6	115,238	.8
Total Gulf	2,617,577	32.6	6,886,902	42.0	6,524,466	46.0
All other ports	591,308	7.3	744,976	4.5	765,832	5.4
Total exports	8,041,306	100.0	16,411,901	100.0	14,190,124	100.0

REVIEW OF TWENTY-ONE YEARS.

The exports of corn from the Gulf ports during the twenty-one years ending with 1904, as shown in Table 22, were relatively small. Corn is apt to be injured by hot weather, and the climate of the Gulf Coast is rather unfavorable to handling this grain. The corn exported from New Orleans during 1899–1903 was 12 per cent of the corn exports of the United States, and in 1904 this port shipped about 8 per cent.

TABLE 22.—*Quantity and percentage of domestic corn exported from Atlantic and Gulf ports for years ending June 30, 1884–1904.*

Customs district.	Annual average.								1904.	
	1884–1888.		1889–1893.		1894–1898.		1899–1903.			
	Bushels.	Per cent.	Bushels.	Per cent.	Bushels.	Per cent.	Bushels.	Per cent.	Bushels.	Per cent.
ATLANTIC.										
Portland and Falmouth	499,440	1.11	198,352	0.31	476,460	0.41	778,024	0.59	1,492,957	2.67
Boston and Charlestown	3,302,373	7.33	4,570,025	7.06	6,981,223	6.03	10,402,358	7.85	4,212,683	7.54
New York	17,333,790	38.46	20,110,314	31.05	22,787,055	19.69	27,905,052	21.05	13,687,137	24.50
Philadelphia	2,640,261	5.86	9,045,098	13.97	11,604,444	10.03	20,249,731	15.28	7,818,356	14.00
Baltimore	8,908,813	19.77	12,950,768	20.00	23,487,583	20.29	29,534,346	22.28	11,759,445	21.05
Newport News[a]	695,882	1.54	1,061,266	1.64	9,656,980	8.34	7,159,757	5.40	1,576,295	2.82
Norfolk and Portsmouth	66,691	.15	233,048	.36	7,316,737	6.32	3,302,208	2.49	379,309	.68
Other Atlantic	3,431	.01	21,472	.02	211,294	.19	476,086	.36	181,581	.33
Total Atlantic	33,450,681	74.23	48,190,343	74.41	82,521,776	71.30	99,807,562	75.30	41,107,763	73.59
GULF.										
New Orleans	6,741,120	14.96	8,275,060	12.78	16,729,776	14.46	16,099,904	12.15	4,242,368	7.59
Galveston	252	(b)	57,682	.09	3,144,001	2.72	3,170,608	2.39	3,716,381	6.65
Other Gulf	82,126	.18	243,989	.37	1,649,519	1.42	1,326,627	1.00	754,965	1.36
Total Gulf	6,823,498	15.14	8,576,731	13.24	21,523,296	18.60	20,597,139	15.54	8,713,714	15.60
All other	4,790,423	10.63	7,997,722	12.34	11,688,951	10.10	12,140,325	9.16	6,037,488	10.81
Total exports	45,064,602	100.00	64,764,796	100.00	115,734,023	100.00	132,545,026	100.00	55,858,965	100.00

[a] The figures for 1884–1888 refer to Yorktown, formerly the leading port of the present Newport News customs district. The name of the customs district was changed to Newport News by the act of October 12, 1888.

[b] Less than 0.005 per cent.

The percentage lost by New Orleans was gained by Galveston, and the percentage of corn exported from Gulf ports was about the same in 1904 as during the five-year period ending with 1903.

Baltimore and New York are the principal corn ports of the Atlantic Coast. During 1884–1893 New York was far ahead of any other port in the corn export trade, but during the next ten years Baltimore held the first place. During the fiscal year 1904 New York's share of this trade was 24.5 per cent and Baltimore's share was 21.05 per cent. The third city in importance in this trade during 1889–1893 and 1899–1904 was Philadelphia. During 1884–1888 and 1894–1898 New Orleans ranked ahead of Philadelphia in corn exports. The export corn trade of Newport News and Norfolk declined from 15 per cent of the total for the United States during the period 1894–1898 to about 8 per cent in 1899–1903 and less than 4 per cent in 1904.

EXPORTS OF FOUR LEADING CORN PORTS.

Table 23 gives the exports of domestic corn for each of the twenty-two fiscal years ending with 1905 for the four leading corn ports of the United States. The largest quantity exported by any one of these cities during the period mentioned was 46,000,000 bushels, shipped from Baltimore during the fiscal year 1900. New York was the leading corn port of the United States in seventeen of the twenty-two years mentioned in Table 23. The irregularity in the quantity of grain exported from year to year is illustrated by the figures for the three years ending with 1903. The exports of corn from Baltimore during the fiscal year 1901 were 41,000,000 bushels; in 1902, 4,000,000 bushels, and in 1903, 17,000,000 bushels. Similar fluctuations took place in the trade of other ports. The crops of these three years help to account for these changes in the exports. The crop harvested in 1900 and exported during the fiscal year 1901 amounted to 2,105,000,000 bushels; the following year the crop was only 1,523,000,000 bushels and the exports fell off. The next crop was larger than that of either of the two preceding years—2,524,000,000 bushels—and the quantity exported increased over the previous year. A similar series of changes occurred during the fiscal years 1890–1892. The corn-crop harvested in the calendar year 1889 was 2,113,000,000 bushels; in 1890, 1,490,000,000 bushels; and in 1891, 2,060,000,000 bushels. The year ending June 30, 1890, afforded relatively large exports of corn for the four ports mentioned in Table 23. The next year the exports were small, and in 1892 there were important increases. Philadelphia exported 17,000,000 bushels of corn during the fiscal year 1890; 2,000,000 bushels in 1891, and 19,000,000 bushels in 1892. During the same years the exports of corn from New York were, respectively, 29,000,000 bushels, 12,000,000 bushels, and 21,000,000 bushels.

TABLE 23.—*Quantity of corn exported from Baltimore, New York, Philadelphia, and New Orleans, 1884–1905.*

Year ending June 30—	Baltimore.	New York.	Philadelphia.	New Orleans.
	Bushels.	*Bushels.*	*Bushels.*	*Bushels.*
1884	5,687,733	19,005,138	1,739,158	6,051,507
1885	11,518,135	20,130,672	4,877,502	6,644,639
1886	15,398,493	24,708,107	3,332,772	8,553,913
1887	8,304,302	14,157,394	2,610,832	7,505,816
1888	3,635,404	8,667,640	641,041	4,949,723
1889	12,125,602	26,658,970	2,774,717	11,812,859
1890	23,089,139	28,872,330	17,086,732	14,990,418
1891	4,389,183	12,089,700	2,245,995	3,051,557
1892	18,625,755	20,634,325	18,883,102	7,442,523
1893	6,524,162	12,296,243	4,234,943	4,077,942
1894	10,343,329	16,424,949	4,504,091	7,968,460
1895	4,843,139	7,536,379	1,382,232	2,572,362
1896	17,075,017	23,527,779	5,566,150	19,676,703
1897	40,255,878	24,340,194	19,281,593	30,322,058
1898	44,920,551	42,105,974	27,288,152	23,109,296
1899	40,422,310	32,929,333	26,261,408	14,637,145
1900	45,723,860	40,019,776	35,729,562	28,333,675
1901	40,832,420	44,529,272	27,223,570	20,948,253
1902	3,919,327	8,300,202	3,824,342	2,159,531
1903	16,773,812	13,746,679	8,209,775	14,420,917
1904	11,759,445	13,687,137	7,818,356	4,242,368
1905 [a]	9,798,099	21,473,617	5,802,358	18,820,308

[a] Preliminary returns.

The large corn crop of 1904 was followed by increased exports during the fiscal year 1905, an increase shared by New York and New Orleans but not by Baltimore and Philadelphia. The exports of 1905 from New Orleans were 15,000,000 bushels more than in 1904; New York gained 8,000,000 bushels in the same time; Newport News gained about 3,000,000 bushels; Galveston, 2,000,000 bushels, and Portland, Me., about 1,000,000 bushels. Baltimore and Philadelphia each exported about 2,000,000 bushels less in 1905 than in 1904. Table 24, in giving with other data the exports from the Pacific ports, shows the relative insignificance of that coast at present in the corn export trade.

TABLE 24.—*Quantity and percentage of domestic corn exported from leading ports during the year ending June 30, 1905.*[a]

Customs district.	Year ending June 30, 1905.	
	Bushels.	*Per cent.*
ATLANTIC.		
Portland and Falmouth	2,434,635	2.75
Boston and Charlestown	8,460,968	9.55
New York	21,473,617	24.25
Philadelphia	5,802,358	6.55
Baltimore	9,798,099	11.06
Newport News	3,181,718	3.59
Norfolk and Portsmouth	778,538	.88
Total Atlantic	51,929,933	58.63
GULF.		
Mobile	1,065,473	1.20
New Orleans	18,820,308	21.25
Galveston	5,851,201	6.61
Total Gulf	25,736,982	29.06
PACIFIC.		
San Francisco	314,859	.36
Puget Sound	35,328	.04
Total Pacific	350,187	.40
All other	10,548,765	11.91
Total exports	88,565,867	100.00

[a] Preliminary returns.

PORT FACILITIES.[a]

GENERAL INFORMATION.

SOURCES OF INFORMATION.

The data concerning the seaboard terminals and the export trade of the railroads, as given in this bulletin, were obtained chiefly from officials of the railroads in question and from reports of boards of trade at the different seaports; and much of the information concerning methods of exporting, especially at the ports of New York, Philadelphia, and Baltimore, was obtained through personal interviews with exporters and steamship men in these cities. The descriptions of harbors, with their entrances, channels, and general location, were obtained from the United States Coast Pilot, published by the United States Coast and Geodetic Survey, and from the inspector of charts of that Office.

TERMINAL FACILITIES.

The terminal facilities of a railroad at a seaport include tracks, wharves, warehouses, elevators, and appliances for transferring freight. The capacity for handling cars is about 1,000 cars a day for a large-sized terminal and sometimes as low as 65 cars a day for a smaller terminal at an important seaport. In some cases two or more railroads will use the same terminal at a port. A usual size for an ocean steamship pier is about 250 feet wide and about 800 feet long. In the middle of the pier are railroad tracks and on either side ocean vessels are moored. The pier being covered, freight is transferred from the cars to the vessels with very little exposure to the weather.

TRANSFER OF FREIGHT TO VESSELS.

Bales of cotton, barrels, boxes, crates, and other packages of freight are carried to the side of the vessel usually by trucks operated by hand. One of the modern appliances for this purpose is a moving platform. The freight is generally transferred to vessels by means of hoists operated by steam or electricity. A rope is fastened to the package and it is drawn on shipboard and lowered into the hold.

---

[a] In the preparation of the following pages acknowledgment is due Mr. Edward G. Ward, internal-commerce expert of the Department of Commerce and Labor, for valuable assistance rendered, especially when he was connected with the Department of Agriculture.

One of the easiest commodities to load on a vessel is grain in bulk. This is transferred to the hold through spouts from elevators. Arrangements are made for loading the grain while the vessel is alongside of a pier taking on board other freight. One arrangement for loading in this manner is a series of belt conveyors running along a gallery above the pier. Along the sides of the gallery are spouts which may be lowered to the hatches of the vessel, and the grain thus transferred to the hold.

Another method of loading grain while the vessel is taking on other freight is by means of a floating elevator. Boats containing the grain are towed alongside the ship and a floating elevator conveys the grain up from the boats and through the hatches of the ship.

The usual storage capacity of a large elevator on the Atlantic and Gulf seaboard is about 1,000,000 bushels, and a very few elevators on these coasts have a capacity of about 2,000,000 bushels. These elevators are not large when compared with some of the elevators in the trade centers of the Middle West. One of the elevators at Chicago, together with its annexes, has a capacity for storing 5,000,000 bushels; another, 2,500,000 bushels. One of the larger elevators on the Atlantic seaport, with a storage capacity of 1,800,000 bushels, is able to unload grain from the cars at the rate of 560,000 bushels per day, and to deliver to vessels at the rate of 1,000,000 bushels per day, both operations going on at the same time.

WHARVES AND DOCKS.

The capacity of wharves for accommodating vessels alongside depends to a large extent upon the arrangement of the wharves and the number of slips. Sometimes vessels are arranged at the piers "double;" that is, one vessel is moored alongside the wharf and a second vessel is fastened to the first one, so that both may be loaded at the same time, the cargo of the outside vessel being transferred across the deck of the ship which is next the pier.

The docks and wharves in most of the seaports of the Atlantic and Gulf coasts are owned and controlled by private enterprise. However, at New York and New Orleans a large proportion of the docks and wharves is owned and controlled by the respective city governments. New York has controlled its wharves and docks for more than thirty years, and the New Orleans wharves and docks have been managed by the city since May, 1901. The city of Baltimore is soon to build new docks and wharves and to control their use. These will be in the upper part of the harbor. A more complete description of the harbors and docks at the individual ports will be found in following pages.

DEPTHS OF CHANNELS.

The depth of the channel leading up to any seaport is a matter of much concern to the business men of the place. One of the greatest interests of the boards of trade of the seaports is to have the channels leading up to their wharves deepened. In compiling Table 25, showing the minimum depth of channel for each of the leading Atlantic and Gulf ports, care has been taken not to do any port an injustice. It must be taken into account that the figures given in the accompanying table are subject to correction on account of possible changes made in the channels since the table was compiled. Work is being done constantly on some of the channels, deepening them or reclaiming them from the sands which have filled in, and in some harbors perhaps the depth of channel may have been lessened to some extent by the action of the forces of nature. Another point to be noted in connection with this table is that the depths are for mean low water, the basis of measurement used by the United States Coast Survey, and that at high tide and under certain favorable conditions the channel may be much deeper and may admit of much larger vessels than the table would seem to indicate. It is not at all improbable that a vessel drawing 30 feet of water might safely enter a harbor whose minimum depth of channel is given in Table 25 as 28 feet. While the minimum depth of the channel leading from the ocean up to Savannah is 18 feet at mean low water, the city is reached at high water by vessels drawing more than 24 feet.

The port of Mobile, owing to the depth and fluid condition of the mud at the bottom of the channel, is accessible even at mean low water to vessels of deeper draft than would appear from the depth of the channel as given in Table 25.

TABLE 25.—*Distance to deep water, and depth of channel, of Atlantic and Gulf ports.*[a]

Port.	Minimum depth of channel.[b]	Distance to deep water.	
		Distance.	Remarks.
	Feet.	*Nautical miles.*	
Portland, Me	30	4½	To open sea.
Boston	27	8	To Broad Sound, open sea.
New York	30	20	Main channel, open sea.
Philadelphia	21	86	To open sea.
Baltimore	30	155	Do.
Norfolk	28	10	To Hampton Roads.
Newport News	26	9	Do.
Wilmington, N. C	17	27	To open sea.
Charleston, S. C	26	9	City to sea.
Savannah	18	20	Do.
Pensacola	30	6	Do.
Mobile	22	32	Do.
New Orleans	26	90	Do.
Galveston	25	8	Do.

[a] Compiled by Mr. G. Bradford, inspector of charts, U. S. Coast and Geodetic Survey, July 28, 1904.

[b] At mean low water.

ORIGIN OF EXPORTS.

In some instances the farm products exported from a seaport are bought and shipped by the local merchants of the port. This is usual in the grain and flour trade at Baltimore and occurs to some extent at New York City. Flour, provisions, and cotton are often shipped from interior points to Europe, merely passing through the seaports of this country, being shipped by merchants whose place of business is not at the ports through which the exports pass. One of the largest cotton firms in the United States has its central offices in a city on the Atlantic coast through which comparatively little cotton passes. This firm buys the cotton through its agents in the South, contracts for ocean freight at whichever port offers the best advantages at the time, and sells the cotton through agents to buyers in Europe.

COST OF TRANSPORTING COTTON.

A member of this firm estimates the average cost of carrying one bale of 500 pounds from an interior point in Texas through one of the Gulf ports to Liverpool at $6. This includes ocean and railroad freights, insurance, office expenses, and minor charges.

In 1897 a special agent of the Department of Agriculture, living at Mobile, Ala., estimated the cost of shipping a bale of 500 pounds of cotton from the interior through Mobile to Liverpool as $7.89. The cost for the same service through Mobile in 1840 was estimated in Hunt's Merchants' Magazine of March, 1840, as $18.15.[a]

When a consignment of goods is loaded at an interior point and addressed to a point in Europe, the agent of the railroad company receiving the goods may give a through bill of lading. This includes the passage over the railroad, the transfer at the seaport, and the passage on the ocean liner.

COMMERCIAL DOCUMENTS.[b]

Through the courtesy of Messrs. Lunham & Moore, of New York, it is possible to show here a set of commercial documents illustrating the shipment of a consignment of evaporated apples from St. Louis, Mo., through the port of New York, to Liverpool, England. The documents consist of a through bill of lading, issued by one of the railroad companies carrying the goods, the invoice, the certificate of marine insurance, and the foreign bill of exchange. It is thought worth while to print these documents in full, that the reader may have before him a full set of shipping papers just as they are used.

---

[a] Agricultural Production and Prices, by George K. Holmes. (Yearbook, Department of Agriculture, 1897, p. 596.)

[b] Parts of these documents which refer to this particular transaction and which were written in on the printed form are indicated here by the use of ***black-faced italics.***

The through bill of lading contains at the beginning the names of the consignor and consignee, the place from which the goods are shipped, the distance, the route, and a description of the articles shipped, including the gross weight and the marks on the packages.

BILL OF LADING.

Form
F. F. D. 26. WHCCO. 12, 1904.
In effect 1st April, 1901.

Export bill of lading No. ***1575c.*** *Contract No.* ***L & M 10014.*** *Lot No. —.*

Dated at ***New York*** *this* ***20th*** *day of* ***Apl., 1905.***

Cars. ***N. Y. C. 40762.***

A AND B RAILROAD CO.,

IN CONNECTION WITH OTHER CARRIERS ON THE ROUTE.

Shipped by ***John Doe*** from ***St. Louis, Mo., 4/3/05*** the following property in apparent good order, except as noted (contents and condition of contents or packages unknown), marked, numbered, consigned, and destined as indicated below:

Consignee and destination. ***Order of John Doe, Liverpool.***

Notify ***Richard Roe & Co., Liverpool.***

MARKS AND NUMBERS.	ARTICLES.
< R. R. & Co. > *Liverpool.*	***One hundred (100) Cases Evaporated Apples.*** ***Shipper's*** weight, ***5,800 lbs.*** (Subject to correction.) (*U. S. law requires agent issuing bill of lading to write either "shipper's" or "carrier's" before "weight.")

To be carried to the port (A) of ***New York*** and thence by ***X Y Steamship Line*** to the port (B) ***Liverpool*** (or so near thereto as a steamer may safely get, with liberty to call at any port or ports in or out of the customary route), and to be there delivered in like good order and condition as above consigned, or to consignee's assigns, or to another carrier on the route to destination if consigned beyond said port (B), upon payment immediately on discharge of the property of the freight thereon, at the rate from ***New York*** to ***Liverpool*** of ***12/6 & 5% per 2,240 lbs.*** gross weight, and advance charges ($——), with all other charges and average, without any allowance of credit or discount; settlement to be made on the basis of 4 shillings 2 pence, 4.25 marks, 5.25 francs, 2.50 Dutch guilders, 3.80 kroner to the dollar, United States gold currency; if in other currency than herein provided for, settlement to be made at the rate of $4.80 to the pound sterling, at the current rate of exchange officially quoted on the day the ocean steamer enters the custom-house at its port of discharge, for which banker's short-sight bills on London can be bought; when ocean freight is prepaid, $4.86 United States gold is equivalent to one pound sterling.

In consideration of the rate of freight herein named, it is hereby stipulated that the service to be performed hereunder shall be subject to the conditions, whether printed or written, herein contained, and said conditions are hereby agreed to by the shipper and by him accepted for himself and his assigns as just and reasonable.

Attention of shippers is called to the act of Congress of 1851, which provides that any person or persons shipping oil of vitriol, unslacked lime, inflammable matches, or gunpowder, in a ship or vessel taking cargo for divers persons on freight, without delivering at the time of shipment a note in writing, expressing the nature and character of such merchandise to the master, mate, or officer or person in charge of the loading of the ship or vessel, shall forfeit to the United States one thousand dollars.

CONDITIONS.

Any alteration, addition, or erasure in this bill of lading which shall be made without the special notation hereon of the agent of the carrier issuing this bill of lading shall be void.

I.—With respect to the service until delivery at the port (A) first above mentioned it is agreed that—

1. No carrier or party in possession of all or any of the property herein described, shall be liable for any loss thereof or damage thereto, by causes beyond its control; or by floods or by fire; or by quarantine; or by riots, strikes, or stoppage of labor; or by leakage, breakage, chafing, loss in weight, changes in weather, heat, frost, wet or decay; or from any cause if it be necessary or is usual to carry such property upon open cars.

2. No carrier is bound to carry said property by any particular train or vessel, or in time for any particular market, or otherwise than with as reasonable despatch as its general business will permit. Every carrier shall have the right, in case of necessity, to forward said property by any railroad or route between the point of shipment and the point to which the rate is given.

3. No carrier shall be liable for loss or damage not occurring on its own road or its portion of the through route, nor after said property is ready for delivery to the next carrier or to consignee. The amount of any loss or damage for which any carrier becomes liable shall be computed at the value of the property at the place and time of shipment under this bill of lading, unless a lower value has been agreed upon or is determined by the classification upon which the rate is based, in either of which events such lower value shall be the maximum price to govern such computation. Claims for loss or damage must be made in writing to the agent at point of delivery promptly after arrival of the property, and if delayed for more than thirty days after the delivery of the property, or after due time for the delivery thereof, no carrier hereunder shall be liable in any event.

4. All property shall be subject to necessary cooperage and baling at owner's cost. Each carrier over whose route cotton is to be carried hereunder shall have the privilege, at its own cost, of compressing the same for greater convenience in handling and forwarding, and shall not be held responsible for deviation or unavoidable delays in procuring such compression. No carrier shall be liable for differences in weights or for shrinkage of any grain or seed carried in bulk.

5. Property not removed by the person or party entitled to receive it within twenty-four hours after its arrival at destination may be kept in the car, depot, or place of delivery of the carrier at the sole risk of the owner of said property and there held subject to lien for all freight and other charges. Property taken from a station at which there is no regularly appointed agent shall be entirely at risk of owner until loaded into cars, and when received from private or other sidings shall be at owner's risk until the cars are attached to trains.

6. No carrier hereunder will carry or be liable in any way for any documents, specie, or for any articles of extraordinary value not specifically rated in the published classifications, unless a special agreement to do so and a stipulated value of the articles are endorsed hereon.

7. Every party, whether principal or agent, shipping inflammable, explosive, or dangerous goods without previous full written disclosure to the carrier of their nature shall be liable for all loss or damage caused thereby, and such goods may be warehoused at owner's risk and expense or destroyed without compensation.

8. If upon inspection it is ascertained that the articles shipped are not those described in this bill of lading, the freight charges must be paid upon the articles actually shipped, and at the rates and under the rules provided for by published classifications.

9. If all or any part of said property is carried by water over any part of said route, such water carriage shall be performed subject to the further conditions that no carrier or party shall be liable for any loss or damage resulting from the perils of the lakes, sea, or other waters; or from explosion, bursting of boilers, breakage of shafts, or any latent defect in hull, machinery, or appurtenances; or from collision, stranding, or other accidents of navigation; or from the prolongation of the voyage. And any vessel carrying any or all of the property herein described shall have liberty to call at intermediate ports, to tow and be towed, and to assist vessels in distress, and to deviate for the purpose of saving life or property.

10. No carrier shall be liable for delay, nor in any other respect than as warehousemen, while the said property awaits further conveyance, and in case the whole or any part of the property specified herein be prevented by any cause from going from said port in the first steamer of the ocean line above stated leaving after the arrival of such property at said port, the carrier hereunder then in possession is at liberty to forward said property by succeeding steamer of said line, or, if deemed necessary, by any other steamer.

11. This contract is executed and accomplished, and all liability hereunder terminates on the delivery of the said property to the steamer, her master, agent, or servants, or to the steamship company, or on the steamer pier at the said port, and the inland freight charges shall be a first lien, due and payable by the steamship company.

II.—With respect to the service after delivery at the port (A) first above mentioned, and until delivery at the port (B) second above mentioned, it is agreed that—

1. The steamer shall have liberty to sail with or without pilots; that the carrier shall have liberty to convey goods in craft and/or lighters to and from the steamer at the risk of the owners of the goods; and, in case the steamer shall put into a port of refuge, or be prevented from any cause from proceeding in the ordinary course of her voyage, to transship the goods to their destination by any other steamer; that the carrier shall not be liable for loss or damage occasioned by fire from any cause or wheresoever occurring; by barratry of the master or crew; by enemies, pirates, or robbers; by arrest or restraint of princes, rulers, or people, riots, strikes, or stoppage of labor; by explosion, bursting of boilers, breakage of shafts, or any defect in hull, machinery, or appurtenances, or unseaworthiness of the steamer, whether existing at time of shipment or at the beginning of the voyage, provided the owners have exercised due diligence to make the steamer seaworthy; by heating, frost, decay, putrefaction, rust, sweat, change of character, drainage, leakage, breakage, vermin, or by explosion of any of the goods, whether shipped with or without disclosure of their nature, or any loss or damage arising from the nature of the goods or the insufficiency of packages; nor for inland damage; nor for the obliteration, errors, insufficiency or absence of marks, numbers, address, or description; nor for risk of craft, hulk, or transshipment; nor for any loss or damage caused by the prolongation of the voyage, and that the carrier shall not be concluded as to correctness of statements herein of quality, quantity, gauge, contents, weight, and value.

General average payable according to York-Antwerp rules. If the owner of the steamer shall have exercised due diligence to make said steamer in all respects seaworthy and properly manned, equipped, and supplied, it is hereby agreed that in case of danger, damage, or disaster resulting from fault or negligence of the pilot, master, or crew in the navigation or management of the steamer, or from latent or other defects, or unseaworthiness of the steamer, whether existing at time of shipment or at the beginning of the voyage, but not discoverable by due diligence, the consignees or owners of the cargo shall not be exempted from liability for contribution in general average, or for any special charges incurred, but, with shipowner, shall contribute in general average, and shall pay such special charges, as if such danger, damage, or disaster had not resulted from such fault, negligence, latent or other defects, or unseaworthiness.

2. That this shipment until delivery at the port (B) second above mentioned is subject to all the terms and provisions of, and all the exemptions from liability contained in, the act of Congress of the United States approved on the 13th day of February, 1893, and entitled "An act relating to the navigation of vessels, etc."

3. That the value of each package receipted for as above does not exceed the sum of one hundred dollars, unless otherwise stated herein, on which basis the rate of freight is adjusted.

4. That the carrier shall not be liable for articles specified in section 4281 of the Revised Statutes of the United States, unless written notice of the true character and value thereof is given at the time of lading and entered in the bill of lading.

5. That shippers shall be liable for any loss or damage to steamer or cargo caused by inflammable, explosive, or dangerous goods shipped without full disclosure of their nature, whether such shipper be principal or agent; and such goods may be thrown overboard or destroyed at any time without compensation.

6. That the carrier shall have a lien on the goods for all freights, primages, and charges, and also for all fines or damages which the steamer or cargo may incur or suffer by reason of the illegal, incorrect, or insufficient marking, numbering, or addressing of packages or description of their contents.

7. That in case the steamer shall be prevented from reaching her destination by quarantine, the carrier may discharge the goods into any depot or lazaretto, and such discharge shall be deemed a final delivery under this contract, and all the expenses thereby incurred on the goods shall be a lien thereon.

8. That the steamer may commence discharging immediately on arrival and discharge continuously, any custom of the port to the contrary notwithstanding, the collector of the port being hereby authorized to grant a general order for discharge immediately on arrival, and if the goods be not taken from the steamer by the consignee directly they come to hand in discharging the steamer, the master or steamer's agent to be at liberty to enter and land the goods or put them into craft or store at the owner's risk and expense, when the goods shall be deemed delivered and steamer's responsibility ended, but the steamer and carrier to have a lien on such goods until the payment of all costs and charges so incurred.

9. That if on a sale of the goods at destination for freight and charges the proceeds fail to cover said freight and charges, the carrier shall be entitled to recover the difference from the shipper.

10. That full freight is payable on damaged or unsound goods, but no freight is due on any increase in bulk or weight caused by the absorption of water during the voyage.

11. That in the event of claims for short delivery when the steamer reaches her destination, the price shall be the market price at the port of destination on the day of the steamer's entry at the custom-house, less all charges saved, steamer being only responsible for such part of the goods as have been actually delivered to the steamer at the port (A) first above mentioned, and steamer not liable for any loss or damage that may have occurred before such delivery, while agreeing to promptly present to inland carriers for account of owners of goods any claims for shortage or loss or damage that may have occurred before delivery of goods at the port (A) first above mentioned.

12. That merchandise on wharf awaiting shipment or delivery be at shipper's risk of loss or damage not happening through the fault or negligence of the owner, master, agent, or manager of the steamer, any custom of the port to the contrary notwithstanding.

13. That this bill of lading, duly endorsed, be given up to the steamer's consignee in exchange for delivery order.

14. That freight prepaid will not be returned, goods lost or not lost.

15. That parcels for different consignees collected or made up in single packages addressed to one consignee pay full freight on each parcel.

16. That freight payable on weight is to be paid on gross weight landed from ocean steamer, unless otherwise agreed to or herein otherwise provided, or unless the carrier elects to take the freight on the bill of lading weight, but inland freight and charges paid on wheat, peas, maize, or other grain, or seed, or other bulk articles, from point of shipment to seaboard, shall be paid by consignee at destination on the weight delivered on board ocean steamer.

17. It is stipulated that in case the whole or any part of the articles specified herein be prevented by any cause from going in the first steamer leaving after the arrival of such articles at said port, the carrier is only bound to forward them by succeeding steamers employed in this steamship line, or if deemed necessary by said carrier it may forward them in other steamers.

18. That the property covered by this bill of lading is subject to all conditions expressed in the regular forms of bills of lading in use by the steamship company at time of shipment, and to all local rules and regulations at port of destination, not expressly provided for by the clauses herein.

19. That if the goods are destined beyond the port (B) second above mentioned, the transshipment to connecting carrier shall be at the risk of the owner of the goods, but at steamer's expense, and that all liability of the steamship company hereunder terminates on due delivery to connecting carrier.

III.—With respect to the service after delivery at the port (B) second above mentioned, and until delivery at ultimate destination if destined beyond that port, it is agreed that—

1. In case the regular steamship service to final port of delivery should for any reason be suspended or interrupted, the carrier, at the option of the owner or consignee of the goods, or the holder of the bill of lading, may forward the goods to the nearest available port, this to be considered a final delivery, or to store them at the port (B) second above mentioned at the risk and expense of the goods until regular service to final port of destination is opened again.

2. That the property shall be subject exclusively to all the conditions of the carrier or carriers completing the transit, the duty of notification above provided for shall fall exclusively within the obligation of the carrier completing the transit, and no prior carrier shall be responsible for the fulfillment of that obligation.

AND FINALLY, in accepting this bill of lading, the shipper, owner, and consignee of the goods, and the holder of the bill of lading agree to be bound by all of its stipulations, exceptions, and conditions, whether written or printed, as fully as if they were all signed by such shipper, owner, consignee, or holder.

IN WITNESS WHEREOF the agent signing on behalf of the said A AND B RAILROAD COMPANY, and of the said ocean steamship company, or ocean steamer and her owner, severally and not jointly, hath affirmed to two bills of lading, all of this tenor and date, one of which bills being accomplished, the other to stand void.

(Signed) *JOHN BROWN, F. F. A., Agent,*
On behalf of carriers severally, but not jointly.

[Signature on back] JOHN DOE.

INVOICE.

PRODUCE EXCHANGE.

ST. LOUIS, MO., *April 17/05.*

MESSRS. ***Richard Roe & Co., Liverpool, Eng.***

To ***John Doe***, Dr.

To 100 cases evaporated apples, 5,800 lbs. @ 4¾ c ***$275.50***
Terms: F. o. b. steamer.
Sight draft documents attached.
$275.50@4.85½=£56-15-0.

CERTIFICATE OF INSURANCE.

CERTIFICATE OF INSURANCE.

Warranted free from average, unless general, or the ship be stranded, sunk, burned, or in collision.

It is especially agreed that all claims under this certificate shall be reported immediately to Messrs. ROBERT LINDLEY SONS & DAVISON, No. 2 Royal Exchange Buildings, London, E. C., to be adjusted by them, and upon approval of same and indorsement on the certificate by them shall be paid in sterling at the counting house of Messrs. BARING BROTHERS & Co. (Limited), in London, at the rate of four dollars and ninety-five cents ($4 95) gold to the pound sterling, claims to be adjusted according to the usages of Lloyds, but subject to the conditions of the policy and contract of insurance.

NOTICE.—To conform with the revenue laws of Great Britain, in order to collect a claim under this certificate it must be stamped within ten days of its receipt in the United Kingdom.

Marks and Nos.

< R. R. & Co. >
Liverpool

$300.00. No. ——.

Cash capital, $1,000,000.

M. & N. INSURANCE COMPANY.

NEW YORK, ***April 20th, 1905.***

This is to certify that on the ***20th day of April, 1905,*** this company insured, under policy No. 23081, made for "***D. E. & Company,***"

Three hundred 00/100 dollars in gold on ***one hundred (100) cases evaporated apples.*** Valued at ——. Shipped on board of the ***S/S of "X Y Steamship Line"*** at and from ***New York to Liverpool:*** and it is hereby understood and agreed that in case of loss, such loss is payable to the order of ***John Doe.*** This certificate to be surrendered on payment of loss. This certificate represents and takes the place of the policy and conveys all the rights of the original policy holder (for the purpose of collecting any loss or claims) as fully as if the property was covered by a special policy direct to the holder of this certificate, and free from any liability for unpaid premiums.

This certificate is not valid unless countersigned by "***D. E. and Company,***" insurance brokers, Produce Exchange, New York.

John Smith,
Vice-President.

Including risk of craft to and from the ship or vessel, each craft to be considered a separate risk.

Countersigned ***D. E. & Company.***

Indorsed: John Doe.

BILL OF EXCHANGE.

[*1*]
Exchange for
£56-15-0 ***St. Louis, Mo., April 17, 1905.***
At Sight of this First of Exchange (Duplicate unpaid)
pay to the order of
OURSELVES
Fifty-six pounds 15s. 0d. Sterling
Value received and charge the same to account of
John Doe.
To ***Mess. Richard Roe & Co.,***
London & Liverpool Chambers,
No. ***2734*** ***Liverpool, Eng.***
[Indorsement.] ***John Doe.***

[*2*]
Exchange for
£56-15-0 ***St. Louis, Mo., April 17, 1905.***
At Sight of this Second of Exchange (Original unpaid)
pay to the order of
OURSELVES
Fifty-six pounds 15s. 0d. Sterling
Value received and charge the same to account of
John Doe.
To ***Mess. Richard Roe & Co.,***
London & Liverpool Chambers,
No. ***2734*** ***Liverpool, Eng.***
[Indorsement.] ***John Doe.***

The conditions printed on the bill of lading, as will be seen, are divided into three parts. The first part pertains to the shipment of the goods by rail from the interior point to the seaport in the United States. It will be noted, among other conditions, that the company carrying the goods claims to be responsible for them on its own lines only, so that in case of damage the company actually having possession of the goods at the time of the damage would be the one from whom payment might be expected. It is also to be noted that the railroad company does not guarantee the delivery of the goods to any certain vessel or within any specified time, but only agrees to forward them with reasonable dispatch.

Part II of the through bill of lading pertains to ocean transportation, and the conditions therein contained are familiar to steamship men. Part III is also part of a marine bill of lading and contains conditions governing instances when vessels fail to reach their intended destination.

This bill of lading is supposed to be filled out in duplicate, and sometimes several copies are required. Most of the steamship lines running from New York to ports in Europe require only one copy of the bill of lading to be delivered to the vessel, but on shipments to St. Petersburg two bills of lading are required. In sending goods to Spain or Portugal the shipper furnishes the vessel with three copies of each bill of lading.

The invoice shown herein states the terms of the sale of this consignment to be "f. o. b. steamer;" that is, when the evaporated apples are delivered to the steamship wharf at New York they are considered delivered to the European purchaser, and the consignor in this country may draw on the purchaser for the amount named in the invoice.

The third paper shown here is the certificate of marine insurance. The fourth is the international bill of exchange, in duplicate. With the exception of the invoice, all these documents require the indorsement of the owner when he transfers the paper to another person.

LIVE-STOCK CARRIAGE.

Ocean vessels require special arrangements for carrying live stock, and for this reason the cattle exported are usually shipped by certain steamship lines which have these special outfits. However, in case no profitable cargo of cattle is obtainable, the cattle space on a vessel may be used for carrying other products, such as lumber and cottonseed meal.

Contracts for carrying cattle across the Atlantic are made between shippers and steamship lines for terms as long as one year, and sometimes for a single voyage at a time. In March, 1905, the contracts for cattle space with vessels sailing from Philadelphia were reported to be for terms of three months each, while the usual term at New York was given as one year.

The average number of cattle carried across the Atlantic by each cattle steamer during the week ending June 25, 1905, was 646. During the previous week the average per vessel was 579.[a]

The number of cattle carried by a steamer on one voyage is variable. On June 21, 1905, a steamship left Boston for Liverpool with 1,106 cattle on board; on the following day 402 were shipped from New York on board another steamer, and were consigned to London and Hull. A vessel sailing from Portland, Me., April 29, 1905, and bound for Liverpool, carried 900 cattle, 562 of which had come to Portland from Canada. The same vessel carried on this voyage 1,376 sheep.

GREAT VARIETY OF ARTICLES IN A CARGO.

The cargo of a large trans-Atlantic liner is of considerable size and value and is made up of a great variety of articles. Detailed lists of such cargoes are published in the leading trade papers and in some general newspapers at the different seaports. One of the larger passenger steamers left New York for Plymouth, Cherbourg, and Bremen on June 20, 1905, carrying a cargo which included the following items, consigned as indicated:[a]

---

[a] Weekly shipments of live stock, compiled by Geo. M. Dickerson, New York.

Bremen:		
Pickled salmon	$18,000	
Corn	10,318	
Cotton	8,564	
Hides	8,278	
Tobacco, in hogsheads	7,650	
Leather, in cases	7,414	
Acetate of lime	6,700	
Manufactures of iron	4,189	
Tobacco, in cases	3,670	
Coffee	3,000	
Lard	3,000	
Sponges	3,000	
Empty barrels	2,910	
Manufactures of wood	2,515	
Tobacco extract	2,250	
Machinery	2,099	
Lubricating oil	1,645	
Dry goods	1,356	
Agricultural machinery	1,308	
Beef	1,225	
Dental goods	986	
Graphite	750	
Shoe pegs	699	
Canned vegetables	650	
Leather, in barrels	478	
Whalebone	362	
India-rubber goods	265	
Hardware	241	
Vehicles	225	
Music	222	
Drills	210	
Shoes	197	
Manufactures of paper	181	
Varnish	150	
Notions	136	
Furniture	118	
Valves	108	
Earthenware	101	
Pictures	100	
Total consigned to Bremen		$105,270
Berlin:		
Automobile vehicles and material	5,687	
Cash registers	5,325	
Dental goods	2,536	

---

[a] New York Journal of Commerce, June 27, 1905, p. 15.

Berlin—Continued.		
Typewriters and material	$1,496	
India rubber goods	1,074	
Manufactures of brass	854	
Roots	548	
Total consigned to Berlin		$17,520
Hamburg:		
Copper		32,526
Lubricating oil		562
Bremerhaven:		
Art leather		237
Household goods		150
Bombay: Domestics		517
Budapest: Ore		483
Bucharest: Leather		270
Cherbourg: Automobile vehicles and material		8,000
Cassel: Lubricating oil		642
Crefeld: Weaving machinery		150
Kotka: Flour		630
Kiel: Copper		3,249
Konigsberg: Lard		1,980
Leipzig: Furs		4,800
Reval: Pump machinery		150
Strassburg: Manufactures of wood		100
Stuttgart: Typewriters		5,198
St. Petersburg: Lead, pigs		24,000
Windau: Agricultural machinery		12,000
Wibourg: Flour		675
Total value of cargo		219,109

This value is by no means unusual for the cargo of an ocean vessel. The absence of any wheat in this cargo illustrates the condition of the wheat export trade at this time.

PORTLAND, ME.

CANADIAN TRANSIT TRADE.

Portland, Me., is situated near the southwest end of Casco Bay and is 4½ miles from the open sea. The channel at mean low water is 30 feet deep in its shallowest place. This city is nearer Canada than any other important Atlantic seaport of the United States and is the gateway for a considerable amount of the trade passing between Canada and trans-Atlantic countries. Especially in winter, when navigation on the St. Lawrence River is checked or stopped altogether, wheat, cattle, and other products of Canada destined to the United Kingdom enter the United States through the custom-houses at Niagara Falls, N. Y., Burlington, Vt., and Newport, Vt., and are carried to ocean vessels at the wharves of New York, Boston, and Portland; also, a large amount of merchandise consigned to

Canada from other countries is received at these ports and forwarded by rail across the border.

The merchandise passing through Portland in this Canadian transit trade during the fiscal year 1904 was valued at over $4,000,000. This sum, added to the value of domestic merchandise exported from the same port, made the total shipments in all foreign trade amount to $16,000,000, thus ranking Portland with Newport News and Mobile.

The Canadian trade enters Portland over two railroads—the Grand Trunk and the Maine Central. The quantity of wheat and number of cattle originating in Canada and shipped via Portland, Me., during the fiscal years 1904 and 1905 are shown in Table 26.

TABLE 26.—*Canadian wheat and cattle shipped via Portland, Me., during the fiscal years 1904 and 1905, by months.*

Month.	Cattle.		Wheat.	
	1903-1904.	1904-1905.	1903-1904.	1904-1905.
	Number.	*Number.*	*Bushels.*	*Bushels.*
July	----------	3,343	441,908	352,315
August	----------	3,056	185,990	26,835
September	----------	1,926	122,102	----------
October	1,639	1,120	460,900	34,264
November	1,318	1,030	461,134	434,280
December	1,495	1,176	1,340,016	1,013,172
January	1,428	1,098	559,207	264,191
February	1,515	1,352	35,431	84,613
March	1,058	1,390	164,785	24,000
April	1,444	1,287	157,155	24,455
May	1,442	962	303,492	188,286
June	1,986	774	332,766	85,038
Total from Portland	13,325	18,514	4,564,886	2,531,449
Total from all United States ports	26,455	42,282	9,457,076	6,027,380

The quantity of Canadian wheat shipped to foreign countries from Portland during the fiscal year 1905 was nine times the quantity of domestic wheat exported from all the Atlantic and Gulf ports during the same time,[a] and during the previous fiscal year the domestic wheat exported from the Atlantic ports was equal to twice the amount of Canadian wheat shipped from Portland. The total shipments of Canadian wheat and cattle from all United States ports during the fiscal years 1904 and 1905 were about double the shipments from Portland alone.

RAILWAY ROUTES.

The Grand Trunk Railway connects Portland with the lake ports of the Province of Ontario and reaches across to important cities of southern Michigan, and also to Toledo and Chicago. At Richmond, east of Montreal, the road branches, the southern line going to Portland and the northern one to Quebec. It is 298 miles from Montreal to Portland over this road and 173 miles from Montreal to Quebec.

---

[a] The domestic exports of wheat during the fiscal year 1905 were very low. See page 29.

The distance from Portland to Quebec over the Grand Trunk Railway is 319 miles. Another connection with Canada is made from Portland via the Maine Central Railroad, which, with its connecting lines, joins Portland with Montreal and Quebec on the north and with St. John and Halifax to the eastward. The distance to Quebec via the Maine Central and the Quebec Central is about 325 miles, or 6 miles farther than over the Grand Trunk line. Montreal, however, is 12 miles nearer Portland by way of the Maine Central and the Canadian Pacific Railway than over the Grand Trunk, the distance by the former line being 286 miles.

The route to St. John follows the Maine Central Railroad out of Portland and enters St. John over the Canadian Pacific Railway, and Halifax is reached from St. John by way of the Intercolonial Railway. By this route the distance from Portland to St. John is 340 miles and the port of Halifax is 275 miles farther on.

The Boston and Maine Railroad connects Portland with Boston, 115 miles to the southwest.

SEABOARD TERMINALS.

The railway seaboard terminals at Portland are on Commercial street, which runs the length of the city along the wharves. The Grand Trunk Railway enters the city at the eastern end of Commercial street and the Boston and Maine Railroad at the western end. The tracks run along the street with switches extending out on the wharves.

Two of the elevators of the Grand Trunk Railway at Portland have a combined storage capacity for 2,500,000 bushels, and the railroad yards along the water front can accommodate 2,000 cars. The stock yards have room for 2,500 head of cattle and the facilities for handling them are excellent.

PORTLAND'S FOREIGN TRADE.

The domestic exports from Portland in 1904 consisted chiefly of meat and meat products, valued at $7,000,000; cattle, at $2,000,000; and corn and wheat, at $1,000,000. The value of all exports from Portland of domestic merchandise in this year was $11,000,000.

The value of merchandise imported into Portland in 1904 was $1,600,000.

BOSTON.

STEAMSHIP WHARVES AND RAILWAY TERMINALS.

The steamship wharves at Boston are 8 nautical miles from the open sea, and the channel leading up to the city is 27 feet deep at its shallowest place at mean low water. The railway terminals are located in different parts of the harbor, The three terminals of the Boston and Maine system cover altogether 117 acres, and include 12 piers for ocean vessels, 3 warehouses, and 2 grain elevators with a storage capacity of 1,500,000 bushels, the railroad having facilities for handling 1,000 cars a day without difficulty. Two of these terminals are on Charlestown peninsula—the Mystic Docks, located on the north side of the peninsula at the mouth of ths Mystic River, and the Hoosic Docks, on the south side at the mouth of the Charles. The piers, yards, and other parts of the terminal at the Mystic Docks cover 86 acres, and there is a reserve freight yard large enough for 3,000 cars.

Provision is made for the refrigerator cars to be loaded under cover, so that refrigerated goods are transferred to vessels without exposure to the sun. The big elevator at the Mystic Docks, with a storage capacity of 1,750,000 bushels, was destroyed by fire July 5, 1904, and a new elevator, with a storage capacity of 500,000 bushels, was begun soon after its destruction.

The railway property at the Hoosic Docks covers 20 acres, and the elevator here has a storage capacity of 1,000,000 bushels. On the opposite side of the harbor, in East Boston, a third terminal of the Boston and Maine covers 11 acres.

Near the Boston and Maine terminals in East Boston are the terminals of the Boston and Albany Railroad, covering about 40 acres and containing 6 wharves, 6 warehouses, and an elevator which has a capacity for storing 1,000,000 bushels of grain.

To the south of the Boston and Maine and the Boston and Albany terminals and across the channel from the main part of the city are the steamship wharves and railway terminals of the New York, New Haven and Hartford Railroad. This property covers 125 acres and has facilities for handling about 1,500 cars a day. The elevator here has a storage capacity of 500,000 bushels. The terminals contain also three covered piers, one uncovered wharf, one hay warehouse, three lumber sheds, eight freight houses, two flour houses, and one coal-discharging plant.

EXPORTS FROM BOSTON.

Although one of the most northern ports of the United States, Boston exports a considerable amount of cotton. In 1904 most of the cotton shipped from Boston was grown in Texas and Oklahoma. As at other seaports, the grain exported came from various parts of this country and also a considerable amount from Canada.

The wheat, corn, and flour exported from Boston is usually consigned to the United Kingdom. During the six calendar years ending with 1903, about nine-tenths of the wheat and corn exported from Boston was consigned to the United Kingdom. Of the 78,000,000 bushels of wheat exported to nine leading European ports, 45,000,000 bushels were consigned to Liverpool and 15,000,000 bushels to London. Liverpool also received 39,000,000 bushels of corn from Boston, while the other leading British ports received 15,000,000 bushels, and only 6,000,000 bushels were consigned to the five ports on the Continent. During the six years just mentioned most of the flour exported by way of Boston went to London and Liverpool.

Table 27, taken from statistics published by the New York Produce Exchange, gives the wheat, corn, and flour consigned from Boston to the leading ports of Europe for the six calendar years ending with 1903.

TABLE 27.—*Total exports of wheat, corn, and flour from Boston consigned to leading European ports for the six years 1898–1903.*

European ports.	Wheat.	Corn.	Flour.
	Bushels.	*Bushels.*	*Barrels.*
Liverpool	45,429,516	38,644,544	2,220,106
London	15,027,408	8,101,954	3,132,086
Glasgow, Bristol, Manchester, and Hull	10,884,611	6,755,674	2,012,286
Antwerp, Hamburg, and Rotterdam	7,030,929	6,053,503	247,156
Total, nine ports	78,372,464	59,555,675	7,611,634

The importance of the cold-storage shipments on trans-Atlantic vessels sailing from Boston is illustrated by the relatively large quantities of fresh beef exported from that city. From 1899 to 1903 Boston exported 31 per cent of all the fresh beef shipped from the United States to foreign countries, and in 1904 Boston's exports of fresh beef were 38 per cent of the total from all ports.

Meat and meat products exported from Boston in 1905 were valued at $35,000,000, or one-fifth of the total value of domestic meat and meat products exported from the United States in that year. Of this part of Boston's exports $11,000,000 was the value of hams and bacon, $10,000,000 of fresh beef, $6,000,000 of lard, and $8,000,000 of other meat and meat products. Other important farm products exported from Boston in 1904 were cattle, valued at $8,000,000; cotton, at $7,000,000; corn and wheat, at $4,000,000; flour, at $3,000,000, and fresh apples, at $1,000,000.

During the fiscal year 1904, the value of domestic exports from Boston exceeded $89,000,000, or 6 per cent of the value of the total exports of domestic merchandise from the United States. The value of merchandise entered at the port of Boston, exclusive of that shipped through for entry at interior custom-houses, was $81,000,000, or 8 per cent of the total imports into the United States.

The storage capacity of the four railroad elevators at Boston, including the new Boston and Maine elevator, is 3,000,000 bushels, and a private elevator in Charlestown has a storage capacity of 200,000 bushels. Grain stored in the Boston elevators is insured against fire by the railroad companies managing the elevators. The charge for storing oats, barley, and malt for twenty days or less and for receiving and delivering, is 1 cent per bushel; for other grain, 1¼ cents per bushel. If the grain is kept in storage longer than the twenty days a charge of one-fourth cent per bushel is made for each additional ten days or part thereof. The charge for blowing grain is one-eighth cent per bushel.

NEW YORK.

THIRD IN IMPORTANCE OF THE WORLD'S PORTS.

New York is the third port of the world in the value of exports and imports, ranking ahead of Hamburg, Antwerp, and Marseille, and surpassed only by London and Liverpool. The total exports and imports at New York for the year ending June 30, 1904, and at five other ports for the calendar year 1903, were as follows:[a]

London	$1,304,754,181
Liverpool	1,185,514,439
New York	1,106,979,046
Hamburg	981,516,000
Antwerp	736,114,000
Marseille	431,552,000

During the fiscal year 1904 the value of merchandise imported at New York was $600,000,000, or 61 per cent of the value of the merchandise imported into the United States. This does not include $41,000,000 worth of foreign merchandise landed at New York and shipped for formal entry to custom-houses in the interior. Of the $1,435,000,000 worth of domestic products exported from the United States in this year, $494,000,000, or 34 per cent, was cleared at New York, and its exports of foreign merchandise were $13,000,000, or about one-half of the total for all ports.

WHARVES, DOCKS, AND WAREHOUSES.

The wharves and docks of this port are about 20 miles from the open sea and the minimum depth of the channel is 30 feet. The steamship docks are along the shores of East River, North River, and the upper bay. Owing to the difficulty of building railroad bridges across the Hudson at this point, practically all the railroads connecting New York with the West, except the New York Central and Hudson River Railroad, have their terminals on the New Jersey shore and transfer passengers and freight across to New York City by means of boats. On the western shore also are piers of several of the trans-Atlantic steamship lines, among which are the North German

---

[a] From the Monthly Consular Reports, April, 1905, pp. 86–87.

Lloyd and the Hamburg-American lines. Among the railroads having terminals on the New Jersey shore, opposite New York City, are the Erie; the West Shore; the Pennsylvania; the Delaware, Lackawanna and Western; the Central Railroad of New Jersey; the Lehigh Valley; and the New York, Ontario and Western. From the wharves of these railroad terminals a large quantity of freight is conveyed to the wharves across the Hudson in lighters or by carrying the loaded cars themselves on barges.

The terminals of the Erie Railroad at Jersey City and Weehawken cover about 50 acres and have facilities for handling about 1,000 cars per day. The property includes nine covered piers, two open piers, one large warehouse, and a grain elevator with a storage capacity of 1,500,000 bushels. Of the covered piers four have two decks each and are 750 feet long by 93 feet wide; each of the other five covered piers has one deck and is 912 feet long by 84 feet wide.

The Lehigh Valley Railroad has three terminals at this port—one covering 261 acres at Jersey City, another at Perth Amboy covering 208 acres, and a third on Manhattan Island covering 11 acres. At the Jersey City terminal there are eight covered wharves with a storage capacity for 2,560 carloads; five uncovered wharves having a total floor space of 620,610 square feet, and 22 warehouses capable of holding 3,111 carloads. The transfer elevator at this terminal can handle 100 carloads of grain per day. All the five wharves at the Perth Amboy terminal are uncovered. Two of them are for coal and three for other merchandise. One warehouse, with a storage capacity for 12 carloads, is located at this terminal. Across the Hudson the Lehigh Valley uses 4 covered wharves and 4 warehouses and has room in all for 385 carloads.

The Jersey City terminals of the Pennsylvania Railroad at Harsimus Cove include four open piers, one covered pier, one partially covered pier, one warehouse, and one grain elevator. The open piers cover 138,500 square feet, and the other two piers have an area of 369,300 square feet and can accommodate 850 carloads of freight. The warehouse has storage room for 80 carloads and the grain elevator holds about 1,200,000 bushels. From 500 to 600 cars a day can be handled at this terminal. In the spring of 1905 this railroad was completing extensive terminal yards and piers at Greenville, a part of Jersey City, situated on New York Bay, a few miles south of the terminal just mentioned. The new yards are constructed on made ground, extending for nearly a mile out from the shore and will have room for several thousand cars.[a]

The New York Central and Hudson River Railroad, including the West Shore Railroad, which it controls, has the use of 2 miles of the water front, some of which is on Manhattan Island and some across the Hudson at Weehawken, N. J. The former is known as the New York Central terminal and the latter as the West Shore terminal. Both together include 12 wharves, 10 of which are open, and three grain elevators. Two of the elevators are located at Weehawken and are part of the West Shore Railroad terminals. The storage capacity of both elevators is given as about 3,250,000 bushels, while the New York Central elevator, in New York City, can store 1,500,000 bushels. While it is regarded as possible to load 4,700,000 [a] bushels of grain into these three elevators, their actual working capacity is estimated at about 4,000,000 bushels. About 1,600 loaded cars per day can be handled at these terminals.

---

[a] Railroad Gazette, March 17, 1905, pp. 238–242.

The New York, Ontario and Western Railway makes use of the West Shore elevators at Weehawken, and has three covered and five uncovered piers at this place. These terminals cover an area about 1,600 feet wide and 6,600 feet long. This road brings to the port dairy products and grain from New York and Pennsylvania.

The port terminals of the Central Railroad of New Jersey at Jersey City cover about 7 or 8 acres. The small quantity of grain in bulk carried by this road for export is transferred at Jersey City from cars to canal boats, which are towed to the vessels to which the grain is to be delivered.

The Baltimore and Ohio Railroad reaches the port of New York over the tracks of the Central Railroad of New Jersey and has the use of eleven or twelve piers at this harbor. Two of these piers are for the use of lighters. About 495 cars a day can be handled at these terminals.

The port terminals of the Delaware, Lackawanna and Western Railroad are located at Hoboken, N. J., opposite New York City. This road brings to the port of New York grain shipped from Duluth and Chicago, flour from Duluth and St. Louis, tobacco from Kentucky and Tennessee, cotton from Texas and Oklahoma, and fruits from New York State, Canada, Illinois, and Missouri.

GRAIN ELEVATORS.

The stationary grain elevators at the port of New York have a combined storage capacity for about 17,000,000 bushels and are together able to transfer more than 375,000 bushels of grain per hour. The floating elevators can each transfer from 5,000 to 14,000 bushels per hour, and have a combined transfer capacity of 178,000 bushels per hour. Some idea of the facilities here afforded for handling grain may be formed by computing the time required for these elevators, working at their full capacity, to transfer the greatest quantity of wheat ever exported in one year from the United States. The largest exports of wheat during any one year were 157,280,351 bushels in the fiscal year 1892. By working at their utmost estimated capacity for ten hours each day and with the proper arrangements and supply of cars and vessels, the New York elevators could transfer this quantity of wheat in about thirty days.

---

[a] Railroad Gazette, April 7, 1905, p. 330.

Nearly all the wharves and docks on Manhattan Island are owned and controlled by the city of New York, and are leased by the city to different individuals and companies.

Some of these leases are for definite periods of time, and others may be terminated at the pleasure of the city. Among the city's tenants occupying these wharves and docks in 1902 were the following trans-Atlantic steamship lines: The Atlantic Transport Company, the Cunard Steamship Company, Compagnie Générale Transatlantique (French Line), and the Hamburg-American Line. Several of the railroads having terminals on the western shore of the Hudson and upper bay rent city wharves and docks.

The gross receipts from the rental of docks and wharves in 1871 was about $300,000; ten years later the annual receipts amounted to nearly $900,000; ten years later, to $1,500,000, and in 1902 they were almost $3,000,000.

One of the highest rentals is paid for the use of pier No. 50, with 125 feet of bulkhead on each side, the area covered being 90,815 feet. The time of occupancy is to be divided into three terms of ten years each, the third term ending May 1, 1929. For the first ten-year term the lessees are to pay an aggregate of $84,375; for the second term, $88,593.75, and for the third term, $93,909.38.

COMMERCIAL HANDLING OF CERTAIN PRODUCTS.

In New York, as in Baltimore, a considerable quantity of grain shipped to foreign ports is bought outright by local dealers and then exported. The approximate cost of bringing a bushel of wheat from Buffalo to New York and placing it on board an ocean steamer in March, 1905, was itemized by a New York grain dealer as follows:

	Cents.
Freight, rail, Buffalo to New York	5.00
Insurance in elevator (thirty days), about	.22
Weighing	.625
Elevator charges	.125
Trimming	.15
Total	6.12

The charge of 5 cents for railroad freight rates includes the elevator charges at Buffalo and ten days' free storage for export. If the grain is left in the elevator longer than ten days, an additional charge of one-fourth cent per bushel is made for each day or part thereof. The insurance on the grain in the elevator as given in the above statement is quoted at 2.50 to 2.75 per cent per annum and the wheat is estimated to be worth $1 per bushel. In case the grain is shipped by a railroad not having an elevator at the New York terminal, a charge is made of one-tenth cent per bushel for each ten days' storage. Under some conditions other items would be included in the statement just given; or if the grain came to New York in a canal boat the items of cost would be different from the ones just quoted.

Some of the large meat-packing companies ship their goods intended for export directly from the place of production or storage to Europe. However, some provisions are bought by New York men and exported from that port to Europe. The railroad rates quoted on provisions to New York City from interior points include the transfer to the ocean vessel. If the New York dealer desires to have inspected the provisions he is exporting, a charge is made on lard of 4 cents per tierce for the inspecting. The charge for weighing is also 4 cents. To determine the net weight of packages of lard, or, rather, the tare to be allowed, one package out of every twenty-five is opened, the lard is taken out, and the empty package is weighed. This is called "stripping," and the fee charged in March, 1905, was 50 cents per tierce "stripped." The standard net weight of a tierce of lard is 340 pounds.

Most of the cattle exported from New York in the spring of 1905 went to Liverpool, London, and Manchester. The charge for ocean freight on cattle to these ports was about $9 (36s.) per head, which included insurance on the cattle. The contracts in force at New York at this time were generally for terms of one year each.

In New York at this time refrigerator space was leased for one year at a time, and the charge was $3.10 (12s. 6d.) per 40 cubic feet.

A large quantity of the apples shipped from the port of New York come from Canada and are not entered at the United States customhouses as imports from Canada or exports from the United States, but are classed separately as in-transit trade. There are considerable quantities of fresh apples exported from New York to points in Norway and Sweden which do not appear in the customs returns as exports to these countries, since the apples are consigned directly to dealers in Hamburg, Germany, who sell the fruit in small quantities to the numerous vessels coming across the Baltic Sea from Swedish or Norwegian ports. Apples produced in the United States which are shipped from the port of New York come chiefly from New York State and some States of the Middle West.

New York's exports of apple products, chiefly evaporated apples, come from New York State, Canada, Michigan, and in some seasons from Illinois, Missouri, and Kansas. The evaporated apples are exported in the form of rings, quarters, and sometimes whole apples, and each form is divided into three grades—prime, choice, and fancy. Apples dried in the sun are not so plentiful as the evaporated fruit, and come chiefly from Ohio, Illinois, Kentucky, Tennessee, and Canada. The Canadian sun-dried apples are graded as choice or fancy, and sun-dried apples from the United States are graded as choice western, prime western, or southern. Chopped apples, cores, and skins, packed in bags, are shipped to Europe for use in manufactures. The evaporated apples are packed in 25-pound and 50-pound bags and are also put up in 1-pound cartons. The apple product trade from New York is handled to a considerable extent by commission men, who buy from the producers and interior merchants and sell to exporters in New York City.

PHILADELPHIA.

FOREIGN TRADE AND ITS ACCOMMODATIONS.

The total exports of all domestic merchandise from Philadelphia during the fiscal year 1904 amounted to $71,000,000, or 5 per cent of the total domestic exports from the United States.

The most important farm products exported from Philadelphia in 1904 were meat and meat products, valued at $9,000,000; flour, valued at $8,000,000; cattle, at $4,000,000; corn, at $4,000,000; cotton, at $3,000,000, and linseed-oil cake and oil meal, at $2,000,000, making a total for these six items of $30,000,000.

The imports entered at Philadelphia during the same time were 5 per cent of the total imports into the United States, and amounted to $54,000,000.

The ocean steamship docks at Philadelphia are about 86 nautical miles from the open sea, and the channel leading up to them in its shallowest place at mean low water is 21 feet deep.

The Pennsylvania and the Philadelphia and Reading railroads have export terminals in Philadelphia. The Baltimore and Ohio Railroad also has important terminals here, but its export business generally goes to Baltimore. The Pennsylvania Railroad has two terminals, the smaller one at Washington avenue, near the center of the city's water front, and the larger one at Girard Point, just below League Island Navy-Yard.

The yards and wharves at Washington avenue cover 60 acres, and have facilities for handling 350 cars a day. Here are nine piers and a grain elevator. At Girard Point there are two uncovered piers, with an elevator at each. The railroad yards and the wharves here occupy 93.6 acres, making the total area of the Pennsylvania Railroad's export terminals at Philadelphia amount to 153.6 acres.

The leading farm products carried by this railroad to Philadelphia for export are grain and grain products, hay, cotton, tobacco, and apples, and they originate in various Southern and Western States.

The seaboard terminals of the Philadelphia and Reading Railroad are situated at Port Richmond, near the upper part of the city's water front, and also at Willow and Noble streets, nearer the center of the city. The terminals at Port Richmond consist of seven piers, four of which are used in the export business, and one grain elevator. The area of the piers is 19.28 acres. These terminals have facilities for handling 1,129 cars a day. At Willow and Noble streets the Philadelphia and Reading Railroad has a water front of about 1,000 feet on which there are two piers. There are no elevators at this place. About 65 cars per day can be handled here.

Besides cotton, hay, flaxseed, oil cake, and cheese, the Philadelphia and Reading carries to Philadelphia for export the following grains and grain products: Wheat, corn, oats, rye, barley, oatmeal, rolled oats, hominy, starch, glucose, dried brewers' grains, malt sprouts, and malt. These products are derived from States as far to the northwest as North Dakota and as far to the southwest as Texas.

The terminals of the Baltimore and Ohio Railroad at Philadelphia include seven piers and four warehouses, with facilities for handling 898 cars per day.

GRAIN ELEVATORS.

The total storage capacity of the grain elevators at Philadelphia in 1904 was more than 4,000,000 bushels. They were capable of receiving in a ten-hour day about 1,000 carloads, or 800,000 bushels, of wheat or corn, and delivering in that time about 1,380,000 bushels of grain. The three grain elevators belonging to the Pennsylvania Railroad system are the property of the Girard Point Storage Company. The elevators belonging to the Philadelphia and Reading system are owned by the Philadelphia Grain Elevator Company. Besides five stationary elevators, there are three floating elevators used for the purpose of transferring grain from one vessel to another. Of these three elevators, the Empire, with a capacity of 10,000 bushels per hour, is the largest. The other two—the Philadelphia and the Columbia—have capacities respectively of 4,000 and 2,500 bushels per hour. As with the other Atlantic seaports, the export trade in wheat and corn at Philadelphia was much less in 1904 and 1905 than in previous years.

SHIPPING CATTLE.

The cattle exported from Philadelphia in 1904 and 1905 came from Chicago and St. Louis chiefly and were consigned to Glasgow, Liverpool, Manchester, and London, and through London to Antwerp. The contracts for cattle space on trans-Atlantic vessels sailing from Philadelphia in March, 1905, were reported to be generally for periods of three months at a time. Some contracts are made for periods as long as one year. The duration of a contract depends largely upon circumstances. At low rates and under certain favorable conditions, the cattle shipper may desire a long-term contract, while the steamship men would desire a short one; at higher rates the steamship men might desire a contract for a long term, while the shipper might prefer to engage space for a single voyage at a time.

Contracts for refrigerator space on vessels sailing from Philadelphia in March, 1905, were reported to be generally for periods of one year each.

BALTIMORE.

ONE OF THE BEST HARBORS ON THE ATLANTIC COAST.

The port of Baltimore is located on the Patapsco River, an arm of the Chesapeake Bay, and has one of the best harbors on the Atlantic Coast.

The city is 155 miles from the open sea. The channel across the shoals at the entrance to the Patapsco River is about 600 yards wide, and the shallowest place is at least 30 feet deep at mean low water.

The harbor itself, extending from Fort McHenry well up into the city, is about 2½ miles long, and for a good part of the distance is 850 yards wide. The docks of the large trans-Atlantic steamers are near the lower end of the harbor. Adjoining Fort McHenry, at Locust Point, is the terminal of the Baltimore and Ohio Railroad, and across the harbor, at Canton, is the terminal of the Northern Central Railroad, a part of the Pennsylvania Railroad system. The upper part of the harbor, which is used by coasting and smaller vessels as well as the bay steamers, has an extensive line of wharfage. Since the destructive fire of February, 1904, the city has undertaken to build its own docks and wharves, and at the present writing (July 15, 1905) the plan is being carried out. The site selected is in the upper part of the harbor and includes the water front along Pratt street. The city is purchasing the old wharves from the owners, and the adjustment of the claims of the various owners constitutes an important part of the problem of constructing the docks and wharves. The price offered by the city for one of the largest wharves was $282,983.64. The acquisition of this property by the city was delayed on account of the adjustment of claims of the owner and of the steamboat company to which he had leased the wharf. One of the smaller sums offered for a wharf was $1,833; the owner asked $2,000.[a]

---

[a] Baltimore Sun, June 28, 1905.

According to preliminary plans, the docks—that is, the water space between the piers—will be larger than the old ones, while the piers will be narrower. When completed, the docks and piers will be leased by the city to private individuals and companies.

RAILROAD TERMINALS.

The terminals of the Baltimore and Ohio Railroad at Locust Point cover 75 acres, and the yards have facilities for handling 2,800 cars a day. There are eight open wharves, several of which are used as coal piers, and there are fourteen warehouses and covered piers, covering a floor space of 724,000 square feet. Two elevators have a combined storage capacity of 3,300,000 bushels and are together able to discharge into vessels 2,000,000 bushels of grain per day.

At Curtis Bay, also in Baltimore Harbor, the Baltimore and Ohio Railroad Company has a coal pier 800 feet by 60 feet.

Across the harbor, at Canton, the terminals of the Northern Central Railway cover 102.5 acres and have facilities for handling 200 cars a day. There are nine piers, four of which are covered, and two warehouses. The two elevators are owned by the Central Elevator Company and have a storage capacity of 1,500,000 bushels. They can receive daily 680 carloads of grain.

The terminals of the Western Maryland Railroad at Port Covington promise to be an important addition to the export facilities of Baltimore. The Western Maryland recently became part of the Wabash Railroad system and connects Baltimore with the West. In March, 1905, Port Covington was already in use. A coal pier 729 feet long, 60 feet wide, and 65 feet high was first used to load a vessel during the winter of 1904–1905.

The covered merchandise pier is 847 feet long by 120 feet wide. An open pier for landing and loading large articles is to be built, and also a transfer float for the purpose of carrying cars between Port Covington and other parts of the harbor. Some export trade through this new terminal had already begun in March, 1905. Cotton from the Indian Territory, provisions and grain from the Middle West, and dried fruit from California were being received here and transferred from the pier by means of lighters to ocean vessels in other parts of the harbor.

LEADING ARTICLES EXPORTED.

Products from practically all parts of the United States are shipped through Baltimore, as is the case with the other leading ports on the North Atlantic Coast. The principal articles exported during the three fiscal years ending with 1904 were as shown in Table 28.

TABLE 28.—*Principal exports from Baltimore, 1902–1904.*

Article.	1902.	1903.	1904.
Wheat flour	$11,986,426	$12,314,089	$11,908,852
Lard	7,412,316	7,420,511	8,338,446
Tobacco, unmanufactured	5,624,113	7,280,643	7,769,671
Corn	2,303,747	9,028,409	6,134,102
Cattle	2,926,355	5,098,090	6,103,830
Cotton	5,785,066	5,538,539	5,476,246
Wheat	13,491,095	5,197,229	2,147,516
Bacon	1,443,630	657,788	1,521,391
Oleo oil	1,230,456	1,371,905	1,506,888
Flaxseed-oil cake and oil-cake meal	854,998	984,055	1,274,756
Rye	279,254	1,074,885	93,176

GRAIN TRADE.

Much of the grain trade of Baltimore is in the hands of merchants who buy the grain, bring it to Baltimore, and ship it to other parts of the United States or export it to foreign countries. These merchants are usually, if not invariably, members of the Baltimore Chamber of Commerce. After selling a consignment of grain to a purchaser in a foreign country, the Baltimore merchant consults a steamship freight agent, who usually is also a member of the Baltimore Chamber of Commerce, and engages space on a certain vessel for the consignment of grain just sold. The merchant who sold the grain may have bought it in Omaha and ordered it shipped to Baltimore in time to be loaded on a certain vessel. If the grain does not arrive within the time agreed upon between the merchant and the steamship freight agent, the merchant may have to supply the load of grain for the vessel by some other means, and may be compelled to buy enough grain in Baltimore to make up the shipment. To avoid losses, some exporting merchants keep a supply of grain on hand in local elevators.

The senior member of one of the grain-exporting firms of Baltimore reports that his firm has correspondents in the following cities in Europe: Liverpool, Belfast, Dublin, Leith, Bristol, Cardiff, Glasgow, Rotterdam, Amsterdam, Antwerp, Copenhagen, Christiania, Mannheim, and Duisburg. The last-named place is a distributing point of grain for the Rhine district. This firm is not one of the larger ones, and the list of cities where correspondents are located is, therefore, not unusual. One branch of this firm's business consists in exporting flour and seeds as well as grain, and in importing, among other things, red-clover seed from Italy.

The great decline of 1905 in the export trade in wheat in the United States was felt by Baltimore as well as by all other ports, except those of the Pacific Coast. During the fiscal year 1905, however, Baltimore shipped more wheat to foreign countries than any other port on the Atlantic or Gulf coast, but its exports were only about 116,000 bushels.

The corn exports from Baltimore did not suffer such a great decline as the wheat. The quantity of corn exported in 1904 was about 12,000,000 bushels and in 1905 about 10,000,000 bushels.

Most of the grain exported from Baltimore during the six calendar years ending with 1903 was consigned to the continent of Europe, especially to Hamburg, Rotterdam, Antwerp, and Bremen, while the flour exported was sent chiefly to Glasgow, Liverpool, and London.

During these years Baltimore exported to the leading ports of the continent of Europe 31,000,000 bushels of wheat and to the United Kingdom 12,000,000 bushels. During the same time 77,000,000 bushels of corn were sent to the continent of Europe and 33,000,000 bushels to the United Kingdom.

The flour exports consigned to the United Kingdom in that time amounted to 8,000,000 barrels, and 3,000,000 barrels were sent to the Continent.

The wheat and corn exported from Baltimore are sold on "certificate final;" that is, the certificate of inspection issued by the Baltimore Chamber of Commerce is taken as final evidence of the quality of the grain when sold, and the seller is not responsible for any deterioration taking place after the certificate is given and the sale made. This method of sale is followed by the Atlantic ports generally.

CATTLE AND MEAT.

In general, the cattle exported from Baltimore are sold and shipped by merchants of that port, who buy largely from Chicago, but also from points farther south. Most of the cattle shipped from Baltimore are carried by one line of steamers and are consigned to Liverpool and London. The cattle space on vessels is leased often for a term of three or four months, covering several voyages, and in the past some contracts are said to have been made for periods of one year. The contracts for cattle space are not made public by the parties concerned, and hence the actual rates charged are not available for publication in this bulletin, but an approximate rate from Baltimore to Liverpool is $8.80 per head, and includes passage to and from Liverpool for the men in charge of the cattle and also storage on board ship for the cattle feed, but does not include the cost of the feed.

The cold-storage space on ocean liners sailing between Baltimore and Europe is leased sometimes for periods of a few months or one year, and, it is said, even for five years; but in March, 1905, the space was said to be sold for only one voyage at a time. As in the case of rates on cattle, the terms of the refrigerator contracts are not generally made public. An approximate charge for cold-storage space from Baltimore to Liverpool in March, 1905, was $2.50 per 40 cubic feet.

This space may be used for the transportation of fresh meat, butter, or any other product requiring refrigeration. The steamship company guarantees a certain temperature to be maintained throughout the voyage.

Unlike the grain and cattle business, the export trade in meat and meat products is conducted through the port of Baltimore to a large extent by packers and dealers in the Middle West.

Only a small part of the exported fresh beef passes through the port of Baltimore, most of it being shipped from New York and Boston.

The value of the domestic merchandise exported from Baltimore during the fiscal year 1904 was $83,000,000; $36,000,000 was consigned to the United Kingdom, of which $24,000,000 went to England. The value of merchandise sent to Germany was $23,000,000 and to the Netherlands $13,000,000.

NEWPORT NEWS.

PROMINENT FEATURES OF THIS PORT.

Newport News is situated at the mouth of the James River, only 9 nautical miles from deep water—that is, from Hampton Roads. The channel leading up to Newport News is 26 feet deep in its shallowest place at mean low water. The port is opposite the mouth of the Elizabeth River and about 11 miles from Norfolk.

The customs district at Newport News was organized under the act of Congress of October 12, 1888, and was originally the Yorktown customs district, which was organized by the act of March 2, 1799.

The value of domestic exports from Newport News declined within the five years ending with 1904. The value in 1900 of both foreign and domestic exports from Newport News was $35,000,000; in 1902, $34,000,000; and in 1904, only one-half as much, or $17,000,000.

The leading exports in 1904 were flour, valued at $4,000,000; cattle, $3,000,000; corn and lard, $1,000,000 each; and tobacco and cotton together worth about $1,000,000.

About one vessel a month carries cattle from Newport News to Glasgow and Liverpool, and about the same number of voyages are made by cattle steamers from Newport News to London, whence some of the cattle are forwarded to Rotterdam. The freight rate on cattle from this port to Europe varies from $7.50 to $10 (30 to 40 shillings) per head. Cattle space on trans-Atlantic vessels sailing from Newport News is leased occasionally for one voyage at a time, sometimes for three months, and under some conditions for terms as long as one year. Cattle space may be used also for such products as lumber and cotton-seed oil cake, so that in case the supply of cattle fails or the cattle rates are too low steamship companies may substitute other kinds of freight. The cattle exported from Newport News generally come from Illinois.

The oil cake shipped from Newport News comes chiefly from St. Louis and Chicago, with occasional shipments from Kansas City and Louisville. The grain exported comes chiefly from Illinois, Indiana, and Ohio; the flour from Minnesota, Illinois, Indiana, and Missouri; the cotton-seed oil cake from Tennessee; and the cotton-seed oil from Kentucky. Some vessels come to this port light—that is, without cargoes—load partly at Newport News, and complete their cargoes at Norfolk or Portsmouth.

The most important railroad at Newport News is the Chesapeake and Ohio, whose terminals cover about 50 acres and have a capacity for handling 2,000 cars a day. The Chesapeake and Ohio Railroad has here three coal piers, five covered merchandise piers, two grain elevators, and a 30-ton electric crane for loading and unloading goods. Four of the covered piers have storage capacity equivalent to 2,400 carloads. The largest pier is 800 feet long and 200 feet wide. Pier No. 4 is 650 feet long, 150 feet wide, and two stories high, and has storage capacity for 1,000 carloads.

NORFOLK.

ITS INCREASING IMPORTANCE.

The Elizabeth River affords a good harbor for the cities of Norfolk and Portsmouth, the only important harbor on the Atlantic coast that is entered from the north. The harbor is about 10 miles from Hampton Roads, and the minimum depth of the channel leading up the river to the cities is 28 feet at mean low water.

Sailing up the Elizabeth River one passes on the left Lambert Point, a seaboard terminal of the Norfolk and Western Railroad, and on the right is Pinners Point, where there are terminals of the Southern Railway and the Atlantic Coast Line. Farther up the river, in the city of Norfolk, the Norfolk and Western Railroad has other terminal facilities. The total capacity of the Norfolk and Western terminals at and near Norfolk is about 500 cars per day. The property covers 110 acres and contains four wharves, four warehouses, and one grain elevator with a storage capacity of 110,000 bushels. Most of the business done at this elevator is local, but occasionally some export trade is handled. At Lambert Point there are three coal piers and two warehouses.

RAILROAD FACILITIES.

The terminals of the Southern Railway at Pinners Point cover 50 acres and 1,000 cars a day can be handled there. The buildings consist of three wharves, one cotton compress, one coal pier, and a covered shed 800 by 200 feet. The Southern handles but little export trade by way of Norfolk.

The railroad yards of the Atlantic Coast Line at Pinners Point have room for storing 1,020 cars, and 600 cars a day can be handled. The three warehouses at this place cover, respectively, 28,000, 45,200, and 54,600 square feet, and the entire terminals extend over about 133 acres.

Opposite Norfolk, at Portsmouth, Va., are the terminals of the Seaboard Air Line, covering 21 acres. The available wharf space for vessels at these terminals is 7,129 linear feet. There are seven warehouses here, but no coal pier or grain elevator. Two hundred and fifty cars daily may be handled here.

The terminal of the Norfolk and Southern Railway is at Berkley, on the point of land at the junction of the eastern and southern branches of the Elizabeth River, and just south of Norfolk and east of Portsmouth. The railroad yards and wharves here cover 30 acres, with a capacity for handling 500 cars daily. There are two wharves and two warehouses at this terminal.

The New York, Philadelphia and Norfolk Railroad connects with Portsmouth and Norfolk by means of steamboats, which cross the Chesapeake Bay from Cape Charles City. At the cities on the Elizabeth River this railroad has 25 acres of terminals, with a capacity for handling 400 cars daily. There are two wharves and two warehouses. This railroad handles no export business via Norfolk or Portsmouth.

The Norfolk and Southern Railway brings into these cities cotton, corn, lumber, and logs from Virginia and North Carolina. The Norfolk and Western brings lard from Chicago and Kansas City and occasionally from Sioux City and South Omaha; cotton-seed oil from Louisville and sometimes from Cincinnati; and flour from various points in Missouri, Illinois, Kansas, Nebraska, and Minnesota.

The leading products brought into Portsmouth by the Seaboard Air Line are cotton and peanuts from the fields of Virginia, North Carolina, South Carolina, Georgia, Tennessee, and Alabama.

The port of Norfolk has increased somewhat in importance of exports in the three fiscal years ending with 1904. The value of exports in 1902 was $7,000,000; in 1903, somewhat less than $9,000,000, and in 1904, more than $9,000,000. The leading farm products exported from Norfolk in 1904 were lard, flour, tobacco, and cattle.

WILMINGTON, N. C.

FACILITIES.

The Cape Fear River, protected at the mouth by a bar, offers a shelter to the coasting vessels and others which desire to escape wintry storms. The anchorage just across the bar, near the town of

Southport, is a good one. Twenty-seven miles farther up the Cape Fear River the port of Wilmington offers not only a safe anchorage, but facilities for loading and unloading trans-Atlantic vessels. The shallowest place in the channel leading from the ocean up to Wilmington is 17 feet at mean low water, and the minimum depth of the channel across the bar at the mouth of the Cape Fear River is 20 feet.

The leading railroads at Wilmington are the Atlantic Coast Line and the Seaboard Air Line. The terminals of the Atlantic Coast Line cover about 13½ acres and are located on the Cape Fear River. The railroad yards have facilities for storing 800 cars and for handling 500 cars a day. The railroad yards of the Seaboard Air Line cover about 25 acres and have facilities for delivering to vessels about 25 carloads of freight per day. There are two uncovered wharves and four warehouses.

EXPORT OF COTTON.

The principal export from Wilmington is cotton, raised in the States of North Carolina, South Carolina, Georgia, and Alabama, and occasionally some from Virginia. The value of the exports from Wilmington in 1904 was $19,085,221, of which cotton made $18,780,288. Most of this cotton was sent to Germany and was carried in German vessels. A considerable quantity, however, was consigned to the United Kingdom. The leading foreign ports to which the cotton from Wilmington is shipped are Bremen, Liverpool, and Ghent.

CHARLESTON.

EQUIPMENT AND ACCESSIBILITY.

One of the best equipped and most accessible ports along the South Atlantic Coast is Charleston, S. C., situated only 9 miles from the sea and 7 or 8 miles from the bar which protects the harbor from the ocean. The jetties across the bar make the channel deep, but at the same time so narrow that sailing vessels and the large steamers find it desirable to be towed through this part of the channel. The safest anchorage, the one best protected against southeasterly winds, is just above the city, in the Cooper River.

The terminals of the Southern Railway at Charleston are along the Ashley and Cooper rivers. There is one open wharf on the Ashley River, and on the Cooper River are four piers and a grain elevator, the entire property covering about 8 acres. One hundred cars per day can be handled here.

Some of the facilities of the port of Charleston for handling ocean trade were illustrated in January, 1904, when the British steamship *Manhattan*, with a cargo of cotton on fire, put into that port for relief. The *Manhattan* had left New Orleans on January 21, 1904, destined for Bremen. The cargo consisted of 30,560 bales of cotton, one of the largest cargoes of cotton ever shipped, and also a considerable amount of cotton-seed meal, cotton-seed oil, rice polish, tobacco, and several thousand feet of lumber. After passing around the Florida capes and entering the Atlantic, a fire was discovered in the cotton. As none of the ports along the South Atlantic coast below Norfolk was supposed to have a channel deep enough for such a large vessel to enter (the *Manhattan* drawing 26 feet 7 inches of water), for a time it was thought that Norfolk would be the nearest place of refuge. However, the captain was informed by a pilot that Charleston could be entered, although the charts in the captain's possession did not show the channel to be deep enough. On January 27 the *Manhattan* crossed the bar and entered Charleston. It was soon tied up alongside the piers of the Charleston Compress and Wharf Company, where the fire was easily extinguished with a comparatively small loss. To defray the expenses of the fire some of the cargo was surveyed and 1,000 bales of the cotton were sold. Bidders were present from various cities, but the Charleston merchants bought the cotton at prices ranging from 13¾ to 14 cents per pound. The cotton damaged by the fire sold at from $25 to $37 per bale. The proceeds of the sale amounted to $47,369, while the total expenses incurred on account of the fire amounted to only $47,000. The value of the vessel and cargo was placed at $3,000,000. After undergoing important repairs and taking on board 500 tons of coal, the vessel left for Bremen and the remainder of the voyage was passed without accident. The insurance companies involved in this transaction complimented the port of Charleston very highly for the satisfactory manner in which the fire was managed and the vessel relieved.

Practically all the merchandise exported from Charleston in 1904 consisted of cotton, its value being $2,300,172, while the value of other merchandise was only $30,503. Most of the cotton was sent to Germany.

The imports at this port for 1903 and 1904 were the largest for many years, the value in 1903 being about four times the value in 1890.

SAVANNAH.

CAPABILITIES FOR EXPORT BUSINESS.

The port of Savannah is reached by a well-protected channel leading up the Savannah River from Tybee Roads, and is about 20 nautical miles from the sea. The harbor of Tybee Roads is protected from the ocean by a bar and affords to vessels a refuge from fall and winter storms. Two good channels across the bar connect the roads with the sea. The main channel has a depth of 19 feet in its shallowest place at mean low water, and the channel leading up to the city of Savannah is almost as deep. The water at the wharves is deep enough for any vessel that can pass up the river. At high water the city has been accessible to vessels drawing more than 24 feet.

The railway terminals at Savannah cover a great many acres. The Central of Georgia Railroad has a terminal extending over 400 acres, and has facilities for handling 1,500 cars a day. This road has a wharfage front of 8,000 lineal feet.

The terminals of the Atlantic Coast Line cover 200 acres, and include two wharves and nine warehouses. About 345 cars a day can be handled at this terminal.

The Savannah terminal of the Seaboard Air Line Railroad is located on Hutchinson Island. This terminal has a wharfage of 10,900 feet and the railroad yards themselves cover 250 acres. The island itself, which is owned by the Seaboard Air Line, contains 1,300 acres. On the wharves and about the terminals are 13 warehouses, 2 cotton compresses, and 2 turpentine storage tanks. There is room for 46 vessels at the wharves and for 1,000 cars in the yards.

Like the other Atlantic ports south of Norfolk, the leading export from Savannah is cotton. The value of the cotton exported from Savannah in 1904 was $48,000,000, and the value of cotton seed and cotton-seed products was nearly $600,000. About one-half the exports of the sea-island cotton from the United States in 1904 was shipped from the port of Savannah. Most of the cotton from this port is consigned to Germany and England.

PENSACOLA.

HARBOR, WHARVES, AND ELEVATOR.

The port of Pensacola is located on the northern shore of Pensacola Bay, 6 or 7 miles from the entrance. The bay itself is about 12½ miles long, has an average width of about 2½ miles, and with its tributaries covers about 150 square miles. The entrance is about three-fourths of a mile wide, and opens into one of the most important harbors on the Gulf of Mexico. The shallowest part of the channel at mean low water is 30 feet deep, and the soft mud on the bottom makes it possible to be used by vessels drawing more water than would be the case if rocks were more numerous. The arms of Pensacola Bay afford water transportation for cotton, lumber, and other products to Pensacola.

The Louisville and Nashville Railroad is the most important railroad terminating at Pensacola. In the fall of 1904 this railroad had in use three large wharves and another one just about completed. Beginning at the northeast, the first one—the Muscogee wharf, is used chiefly for loading coal. phosphates, and lumber. It is 2,240 feet long, and at the sea end 120 feet wide. The entire area is 190,200 square feet.

On this wharf are 13 coal chutes and 4 grain chutes, all of which can be pulled out of the way when not in use, and are equipped with extensions by which the hatches of vessels of any size may be reached.

Next to the Muscogee wharf is the Tarragona Street wharf, which is covered by two long warehouses, and is 1,950 feet long by 130 and 140 feet wide. One of the warehouses is used for receiving imports, the other for discharging exports. At the shore end of the wharf is a grain elevator having a storage capacity of 500,000 bushels. A system of belt conveyors extends out from the elevator along the pier for 1,886 feet, and has a capacity for delivering 10,000 bushels of grain per hour to vessels. Alongside the belt gallery there are 27 spouts for loading vessels. The elevator is also equipped with machinery for handling, weighing, and cooling grain. This last is of especial importance on account of the warm climate of the Gulf region.

A slip 160 feet wide separates this wharf from the one at the foot of Commandancia street. This latter wharf is 2,065 feet long and 110 feet wide, and contains a two-story warehouse 1,200 feet long. Five tracks, all under cover, run alongside this warehouse, three tracks on the lower floor and two on the upper. Vessels alongside this wharf can be loaded from both floors of the warehouse at once and also from cars directly. Cotton and other freight handled at this and the adjoining wharf at Tarragona street are kept constantly under cover, and are thus protected from the rain while being loaded on vessels.

Electric lights on these wharves make it possible to transfer cargoes at night. A fourth wharf is being built at Jefferson street, just east of the Commandancia street wharf. The Louisville and Nashville Railroad can handle 1,000 cars a day at these terminals.

The leading farm product exported from Pensacola in 1904 was cotton, valued at $8,000,000. Other important farm products exported from this city in 1904 were leaf tobacco, cotton seed, wheat flour, cotton-seed oil, corn, and grease and grease scraps, valued in all at $600,000.

The total exports of domestic merchandise from Pensacola in 1904 amounted to about $16,000,000.

MOBILE.

FREIGHT BROUGHT BY RAIL AND RIVER.

The entrance to Mobile Bay is 39½ nautical miles west of the entrance to Pensacola Bay and 91 nautical miles northeast of the South Pass, through which access is gained to New Orleans.

Mobile Bay is about 27 miles long and for most of its length is about 8 miles wide. It is one of the easiest harbors on the Gulf to enter, unless the sea is unusually rough at the bar. There is good anchorage in the lower bay and an excellent harbor of refuge. At the city wharves the water is from 12 to 23 feet deep.

It is about 32 miles from the city of Mobile to the open water of the Gulf, and the channel at mean low water is nominally 22 feet deep at its shallowest place—that is, over the bar which protects Mobile Bay from the ocean. The depth and fluid condition of the mud at the bottom makes the channel actually deeper than the official measurement, and vessels drawing as much as 24½ feet of water have entered the harbor.

Between Hampton Roads and New Orleans there is no other city on the two coasts that exports so great a variety of products as Mobile. The products exported represent nearly every class of articles produced in the United States.

The terminals of the Louisville and Nashville Railroad at Mobile are much smaller than at Pensacola, the terminals at Mobile having only one wharf and a water front of about 1,500 feet. The terminals here include one shed and freight house and one warehouse. The principal products brought by the Louisville and Nashville into Mobile are grain products and hay, chiefly from Illinois, Indiana, Kentucky, Tennessee, Wisconsin, Minnesota, Kansas, and Missouri. The cotton carried by this railroad for export is taken to Pensacola. About 100 cars a day have been handled at the Mobile terminal, the number depending upon the character of the freight and the facilities for transferring to the vessel.

The principal railroad bringing farm products into Mobile for export is the Mobile and Ohio. The seaboard terminals of this road extend along a water front about 1 mile long, interrupted somewhat by city wharves. The Mobile and Ohio wharves consist of one fruit wharf with berth space for three to five steamers, two fruit warehouses, two open wharves, and three general merchandise warehouses, having, respectively, 120,000, 68,000, and 25,000 square feet of floor space. The grain elevator of the Mobile and Ohio Railroad at this place has a storage capacity of 250,000 bushels. The grain products and hay brought over the Mobile and Ohio come from what is known as the "lower and upper Missouri River territory," including chiefly the States of Missouri, Kansas, Arkansas, and Minnesota.

A new railroad, bringing considerable cotton into Mobile—the Mobile, Jackson and Kansas City—already has a terminal, covering 69 acres, located at Choctaw Point where the Mobile River enters the bay. This road is able to handle here about 200 cars a day. It has completed one wharf 1,000 feet long, and is building another which will be 500 feet long. Most of the cotton brought over this road into Mobile is grown in Alabama and Mississippi.

The larger rivers emptying into Mobile Bay are navigable, except at low water, for several hundred miles, and are highways for an important trade between interior points in Alabama and the port of Mobile. The Alabama River affords water transportation between Montgomery and Mobile, a distance of 400 miles, while the Mississippi Sound and the chain of lakes at its western end make it possible for small vessels from Mobile to reach New Orleans without having to encounter the rougher waters of the Gulf of Mexico.

VALUE OF FOREIGN TRADE.

The value of exports of domestic merchandise from Mobile in 1904 was about $17,000,000, or about the same as from Newport News. The leading farm products exported from Mobile in 1904 were cotton, valued at $8,000,000, or about the same as the cotton exported from Pensacola; flour and corn, valued at nearly $2,000,000; and meat and meat products, at about $1,500,000. Other farm products exported from Mobile during 1904 included cattle, hogs, horses, mules, sheep, bread and biscuit, coffee, eggs, feathers, nuts, hay, hops, malt, oil cake, fresh and dried apples, prunes, raisins, canned fruits, nursery stock, cotton-seed oil, linseed oil, dairy products, rice, cotton seed, starch, sirup, sugar, tobacco, and vegetables. There was a marked increase in the exports of provisions from Mobile in 1905 as compared with 1904, the largest article of increase being lard.

The three leading countries to which exports were consigned from Mobile during 1904 were Germany, Cuba, and the United Kingdom. The total exports to these countries from Mobile was $13,000,000 and the exports to all other countries were valued at $4,000,000.

Among the principal farm products imported at Mobile are bananas and coffee. During 1904 this port received $1,000,000 worth of bananas, and coffee valued at $39,000. Nearly two-thirds of the imports received at Mobile during 1904 came from Mexico.

NEW ORLEANS.

APPROACH FROM THE GULF.

The approach to New Orleans from the Gulf of Mexico through South Pass is afforded by a channel 26 feet deep at mean low water and about 200 feet wide. This pass is generally used by merchant vessels and can easily be distinguished from a distance by the line of smoke made by vessels passing up and down. Once through the pass the channel broadens to 600 feet and the depth is considerably more than in the pass. The distance from the sea to New Orleans is over 90 miles.

WHARF MANAGEMENT.

About 6 miles of the wharves at New Orleans, which extend along the north bank of the river, are owned and controlled by the city.

The city wharves were leased in 1891 to a private corporation for a term of ten years. At the expiration of this term, May 28, 1901, the city wharves and public landings were taken in charge by the board of port commissioners of the city of New Orelans. Immediately after this change the wharf fees were reduced and charges so adjusted that the total reduction to vessels was estimated to be from 25 per cent to 83⅓ per cent, as compared with the previous ten years. The new charges were 2 cents per ton per day for each vessel for the first three days and 1 cent per ton per day for the next three days, and no charge at all for twenty-four additional days, making the total cost for thirty days 9 cents per ton. Thus, if a 6,000-ton vessel was tied up at the wharf for one day, the charge would be only $120; if for thirty days, the charge would be $540. Under the old system the charge for this vessel would have been not less than $740, even if the vessel stayed but one day.

It is the policy of the board of commissioners to make no charge for merchandise landed upon the wharves or city landings, whether for export or for import. The intention is that the vessel, not the merchandise, shall pay the wharfage fee.

The charge for harbor dues for a vessel with a general cargo is $15 and for a vessel carrying fruit or sailing in ballast the charge is $10.

RAILROAD TERMINALS.

Among the railroads bringing farm products into New Orleans for export are the Illinois Central, the Texas and Pacific, the New Orleans and Northeastern, and Morgan's Louisiana and Texas Railroad Company.

The terminals of the Illinois Central Railroad are located in the city proper at the Stuyvesant Docks and extend for 1 mile along the north bank of the river, just above the city wharves. The Illinois Central brings farm products from practically all the Mississippi Valley, from Canada on the north, Ohio on the east, and the Rocky Mountains on the west. The elevator, warehouses, and most of the wharves at the Stuyvesant Docks were destroyed by fire on February 26, 1905, but within four months much of the property destroyed was replaced, and by October 1, 1905, the entire terminals will probably be completely restored. The wharves are 150 feet wide, and up to June 30, 1905, had been completed for a distance of about 3,000 feet. A new cotton warehouse about 130 feet wide and 2,500 feet long is to be completed in time for the crop of 1905, and will take the place of the smaller warehouse which was burned. Two brick warehouses for general merchandise, which were lost in the fire, are being replaced (July, 1905) by fire-proof buildings, built of steel, cement, and brick, and will have no wood in their construction.

The covered wharves which before the fire were protected by wooden sheds, will now be covered by a steel shed with cemented roof. The first elevator completed since the fire has a storage capacity for 1,500,000 bushels, and a second elevator, with a storage capacity for 1,000,000 bushels, is to be ready for use by October 1, 1905.

Opposite New Orleans, at Westwego, are the principal Gulf terminals of the Texas and Pacific Railway, covering about 200 acres. About 300 cars a day can be handled here. The wharves extend along 4,000 feet of shore line and include five wharves for general merchandise, two wharves for grain only, and two elevators having storage capacities of 350,000 bushels and 1,000,000 bushels, respectively. There is also a corn drier. The Texas and Pacific Railway brings into New Orleans, for export, cotton and cotton-seed products and grain and grain products chiefly from the west as far as Texas and the northwest as far as Nebraska.

The traffic of the Queen and Crescent Route enters New Orleans over the New Orleans and Northeastern Railroad and makes use in the city of a terminal covering about 3¾ acres. With average loading facilities, 304 cars a day can be handled here. There is one continuous wharf 1,490 feet long and about 100 feet wide and one warehouse 500 by 75 feet. About three-fourths of the freight handled by this road comes from Mississippi, and the rest chiefly from Alabama and Louisiana. The chief articles brought into New Orleans by the Queen and Crescent Route are cotton and cotton-seed products.

The New Orleans terminals of Morgan's Louisiana and Texas Railroad and Steamship Company, a part of the Southern Pacific System, are at Algiers and Gretna, across the river from New Orleans proper. The wharf at Algiers covers 6.93 acres. The railroad yard has 38.8 miles of track, and 150 cars a day can be handled here. The terminal at Gretna is considerably smaller, the wharf covering about 2.58 acres and the yard containing 5.3 miles of track. About 60 cars a day can be handled here. The chief articles brought over the Southern Pacific lines are rice, cotton, and cotton-seed products, coming chiefly from Louisiana, Texas, Indian Territory, and Oklahoma. There are also some grain and grain products brought into New Orleans over this road from Texas. The principal Gulf terminal of this railroad system is not at New Orleans, but at Galveston.

On the left bank of the river just below New Orleans are the docks at Port Chalmette, where grain, cotton, and other articles are loaded for export.

RIVER CONNECTIONS.

The river connections of New Orleans with other points in the Mississippi Valley are too well known to require space here. The water connection by way of Lakes Pontchartrain and Borgne and the Mississippi Sound with Mobile Bay and the rivers emptying into it makes New Orleans accessible by water to interior points in Alabama. This water route can be used by vessels of light draft only. The lakes named are connected with the city of New Orleans by means of canals.

One of the interesting features of the port of New Orleans is the small proportion of sailing vessels that clear from this port, a proportion smaller than from any other leading port of the United States. The numbers of both sailing and steam vessels which cleared from New Orleans during the fiscal years 1899 to 1904 appear in Table 29.

Table 29.—*Number of sailing and steam vessels cleared from the port of New Orleans, 1899–1904.*

Year ending June 30—	Sailing.	Steam.	Year ending June 30—	Sailing.	Steam.
1899	63	959	1902	42	1,079
1900	62	1,125	1903	49	1,075
1901	52	1,195	1904	27	924

INTERNATIONAL TRADE.

The value of the exports from New Orleans increased greatly during this time, although the number of vessels carrying the exports decreased. The value of the exports from New Orleans in 1899 was $88,000,000; in 1892, $134,000,000, and in 1904, $149,000,000.

The value of imports also increased from $12,000,000 in 1899 to $34,000,000 in 1904. The articles exported from New Orleans go to many ports. Cotton in 1904 went chiefly to Liverpool, Bremen, Havre, Genoa, and Barcelona, Liverpool receiving more than twice as much as any of the others. Other ports to which considerable quantities of cotton were sent were Manchester, Belfast, London, Antwerp, Dunkirk, Hamburg, Rotterdam, Venice, Trieste, Marseille, Malaga, Oporto, and Copenhagen. The corn exported in 1904 went chiefly to Liverpool and Copenhagen, with considerable quantities to Belfast and Aarhuus, the latter being an important grain port on the Baltic Sea. Other European ports to which large quantities of corn were shipped from New Orleans were Havre, Rotterdam, London, Antwerp, and Manchester.

The wheat trade of New Orleans in 1904 was directed chiefly to Hamburg, Antwerp, and Copenhagen. Liverpool and Rotterdam each received about 500,000 bushels, and considerable quantities were sent also to Manchester, Newcastle, London, Leith, Dunkirk, Bristol, and Aarhuus.

The export flour trade from New Orleans went chiefly to London with smaller quantities going to Glasgow, Bristol, Rotterdam, Hamburg, Liverpool, and Copenhagen.

The principal farm products imported at New Orleans are sugar from Cuba, coffee from Brazil, and bananas from Central American countries. During the fiscal year 1904 the value of raw cane sugar imported at New Orleans was $10,000,000; coffee, $9,000,000, and bananas, $2,000,000. For the same year the value of all merchandise imported at this port from Cuba was $10,000,000; from Brazil, $9,000,000; from Mexico, $6,000,000; from British India, $3,000,000; from the United Kingdom, $2,000,000, and from all other countries, $4,000,000.

GALVESTON.

RAPID RISE TO PROMINENCE.

The entrance to Galveston Bay is about 300 nautical miles west of South Pass. Galveston Harbor is located at the entrance to the bay, and is about 8 miles from the open sea. The depth of the channel over the bar is 25 feet at mean low water. The outer harbor affords an excellent shelter and is often used as a refuge for coasting vessels during the winter. The inner harbor, or Galveston Channel, is about 3½ miles long. Since the destructive hurricane and flood of 1900 a sea wall has been commenced to protect Galveston from further destruction by the sea. The wall is about 3 miles long and 17 feet high; at the base it is 16 feet thick and tapers to 5 feet at the top. The material used is concrete, made of cement and granite, strengthened by steel rods. In front of the wall, along the sea, is an apron or rough low wall of large blocks of stone.

EQUIPMENT FOR LARGE TRADE.

There is room at the wharves of the city for about 90 or 100 vessels at one time. Along Galveston Channel for some 2 miles or more are the principal wharves of the city, which are owned and controlled by the Galveston Wharf Company. Here are the seaboard terminals of all the Galveston railroads, except the Southern Pacific. The sheds and warehouses on the property of the Galveston Wharf Company cover about 1,600,000 square feet, and five of the warehouses located on these wharves each covers more than 200,000 square feet. These sheds and warehouses can store 309,598 bales of cotton. There are about twenty piers and two elevators. Elevator A has a capacity for storing 1,600,000 bushels; it has a delivering capacity of 70,000 bushels per hour, and a receiving capacity of 200 cars per day. Elevator B has a storage capacity of 600,000 bushels. The wharf company has 36 miles of track and facilities for handling more than 1,000 cars a day.

Just west of the Galveston Wharf Company's property is the principal Gulf terminal of the Southern Pacific Company. Plans have been made for about seven large piers, two of which have been completed. The Southern Pacific Company controls a water frontage of 3,300 feet, and has piers built to accommodate seven large steamers in single file. Pier B alone has berth space extending along 8,450 linear feet. About 400 cars a day can be handled on these piers, and the sheds cover 9 acres. The Southern Pacific uses electric conveyors to transfer merchandise between cars and vessels, and the 28 conveyors in use have an estimated capacity of 3,500 tons per day of ten hours. The water at the piers is 25 feet deep and the basin in front of them is 700 feet wide. On Pier A is an elevator with a storage capacity of 1,000,000 bushels.

By means of these terminals the Southern Pacific is able to conduct a large traffic between New York and the Pacific Coast. The Southern Pacific steamers from New York carry to Galveston freight which is there transferred to different parts of Texas, Utah, New Mexico, Arizona, California, and Oregon and to ports across the Pacific Ocean.

It is reported that the quantity of freight passing between the East and the West through Galveston over the Southern Pacific route averages about 20,000 tons a week for the entire year, and in the busy season has been as high as 40,000 tons in one week.

The Gulf, Colorado and Santa Fé Railway makes use of the Galveston Wharf Company's terminals and brings its export grain to this place from Kansas. The Gulf and Interstate Railway of Texas carries to Galveston for export grain and grain products from Kansas, Nebraska, and Missouri. The Missouri, Kansas and Texas Railway of Texas handles its export business at Galveston over the Galveston, Houston and Henderson Railroad tracks, and carries chiefly cotton, cotton-seed products, and grain. These products are raised chiefly in Texas, Indian Territory, Oklahoma, Kansas, and Missouri.

GREAT GAIN IN EXPORTS.

During the fiscal year 1905 most of the cotton shipped out of Galveston to foreign countries was consigned to the ports of Liverpool, Bremen, Havre, Manchester, and Genoa, with important quantities also to Hamburg, Antwerp, Venice, Barcelona, Trieste, and Rotterdam. The corn went chiefly to Hamburg, Liverpool, and Rotterdam, with quantities of over 100,000 bushels each to Antwerp, Manchester, Belfast, Dunkirk, and Havre. By far the largest part of the grain exported from Galveston in 1904 was consigned to Liverpool. Manchester, Belfast, Bremen, and Rotterdam together received about 1,000,000 bushels, and other important consignments went to Havre, Copenhagen, and Swansea. The flour exported from Galveston during 1904 went principally to London, Belfast, and Glasgow. Packing-house products were consigned chiefly to Liverpool and Hamburg during 1904 and also 1905. The increase in this port's trade is illustrated by the following statement of the value of domestic merchandise exported from Galveston during the ten fiscal years ending with 1904:

1895	$41, 886, 651	1900	$85, 657, 524
1896	36, 397, 091	1901	101, 857, 300
1897	58, 198, 174	1902	96, 722, 066
1898	68, 428, 621	1903	104, 121, 087
1899	78, 476, 681	1904	145, 316, 457

The value of imports at Galveston increased from $369,575 in 1895 to $1,847,646 in 1904. Most of these imports came from the United Kingdom, Germany, Mexico, and Cuba.

O